DOCUMENT RESUME

ED 423 484 CG 028 709

AUTHOR	Finigan, Michael
TITLE	Oregon Public School Drug Use Survey, 1996: Key Findings Report.
SPONS AGENCY	Oregon State Dept. of Human Resources, Salem.
PUB DATE	1996-10-21
NOTE	62p.
AVAILABLE FROM	Office of Alcohol and Drug Abuse Programs, Dept. of Human Resources, 500 Summer St., NE, Salem, OR 97310; Tel: 503-945-5763.
PUB TYPE	Numerical/Quantitative Data (110) -- Reports - Research (143)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	American Indians; Antisocial Behavior; Cocaine; *Drinking; Driving While Intoxicated; *Drug Use; Elementary Secondary Education; Marijuana; Peer Groups; Predictor Variables; *Public Schools; Risk; Sex Differences; *Smoking; Student Surveys; Violence
IDENTIFIERS	Amphetamines; Inhalants; *Oregon; Smokeless Tobacco

ABSTRACT

Alcohol, tobacco, and other drug use among public school students continues to be a major concern in Oregon as it is across the nation. This report, the sixth of the biannual public school drug use surveys conducted in Oregon since 1986, discusses major findings. These findings are (1) marijuana use is up for both the eighth and eleventh grades; (2) cigarette use is up for both the eighth and eleventh grades; (3) although still confined to a small percentage of students, use of other illicit drugs such as cocaine and amphetamines is also up; (4) the use of most illicit drugs is still below the levels found in the 1980s; (5) sixth grade use of illicit drugs is the same or lower than in 1994; (6) risk factors for alcohol, tobacco, and other drug use include peers that use; parental attitudes favorable to alcohol, tobacco, and other drug use; adults in the community who use; and peer attitudes favorable to use. A list of 37 key findings is provided. Each key finding is also depicted graphically. A list of risk factors for drug use is included. Seven tables depict differences in the use of 22 types of drugs among eleventh, eighth, and sixth graders. Three figures assess trends in the use of illicit drugs among these three grades. (MKA)

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ED 423 484

The 1996
Oregon Public School Drug Use Survey

Key Findings Report

prepared for the
Office of Alcohol and Drug Abuse Programs
Oregon Department of Human Resources

by Michael Finigan, Ph.D.
Northwest Professional Consortium

October 21, 1996

CG028709

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The 1996 Oregon Public School Drug Use Survey: Key Findings Report

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Prepared for the
Office of Alcohol and Drug Abuse Programs
Department of Human Resources

Antonia C. Phipps, Interim Director
500 Summer Street, NE
Human Resources Building
Salem, OR 97310
(503) 945-5763

by Michael Finigan, Ph.D.
Northwest Professional Consortium
(503) 635-9896

October 21, 1996

LIST OF KEY FINDINGS

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KEY FINDING #2 Marijuana use among eleventh grade students in Oregon has risen dramatically. Since 1990, recent (30 day) reported use of marijuana by eleventh graders has increased 68%. 5

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KEY FINDING #29 Using a Discriminant Function Analysis, a model emerges for each grade to predict the relative importance of risk factors in cigarette use. 38

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Introduction

Alcohol, tobacco, and other drug use among public school students continues to be a major concern in Oregon as it is across the nation. Alcohol, tobacco, and other drug use not only affects students' scholastic performance but often is related to their willingness to remain in school as well. Substance abuse at an early age sets a pattern that can follow an individual throughout his or her life.

This is the sixth of the bi-annual public school drug use surveys that have been conducted since 1986 in Oregon. These surveys have been patterned in their sampling methodology and in their drug use questions after the ongoing annual national surveys of the National Institute on Drug Abuse (NIDA) ("Monitoring the Future," Johnston et. al., 1985-1995), which have become widely accepted as a source of authoritative information on public school drug use at the national level.

In 1994 the Oregon survey was part of a six-state federally funded effort to measure substance use and risk and protective factors related to that use. The Risk and Protective Factor framework developed by J. David Hawkins and Richard F. Catalano of the Social Development Research Group (University of Washington) was used as the basis of this effort. The Hawkins and Catalano approach examines factors in four domains (community, family, school, and peer/individual) that are associated with the risk of alcohol, tobacco, or other drug use or the protection from such risk. A new survey instrument was developed by the six-state consortium and administered in Oregon by Northwest Professional Consortium. New features of the 1994 survey in Oregon included the addition of a sixth grade sample to the eighth and eleventh grades, and an increase of the sample size to allow for improved regional comparisons in addition to the statewide comparisons.

The 1996 Oregon survey continued the inclusion of a sixth grade sample as well as the use of adequate numbers to track regional data. The survey instrument used this year was a modification of the survey instrument used in 1994, incorporating a shorter version of the Risk and Protective Factors instrument. The scale items that were retained in the 1996 version of the survey were those that had been shown to be the most predictive of alcohol, tobacco and other drug use among students based on the 1994 Oregon survey. These factors have allowed for the examination of trends in student drug use at three grade levels over time and by region within Oregon, and the examination of the risk and protective factors most associated with drug use in Oregon's student population. We hope that the results will enable policy makers to target prevention efforts to reverse the trends of increasing student drug use in Oregon and in the nation.

Methodology

In the spring of 1996, Northwest Professional Consortium, under contract with the Office of Alcohol and Drug Abuse Programs, administered the bi-annual state-wide alcohol and drug use survey in the public schools. Students were sampled as they have been since 1986, using a cluster sampling design in which schools were randomly selected and the survey administered within the chosen schools to the appropriate grade level.

Sample Design and Implementation

Students in Oregon attend a wide variety of schools and school settings. There are small schools, in rural settings, comprised of children in a wide number of grades. Other schools are large and urban, comprised of students in a small number of grades. These different school environments create different opportunities for exposure to alcohol, tobacco, and other drug use. In addition, Oregon is geographically a large state, consisting of several distinct regions with different local cultures. To reflect the diversity of regional and school size differentials, a multi-stage sample design was implemented. The sampling strategy is identical to that implemented in previous administrations of this survey from 1986 to 1994 and is similar to the strategy used in the NIDA "Monitoring the Future" national survey. The strategy in Oregon is described below:

Stage 1: Five geographic regions were designated by the Office of Alcohol and Drug Abuse Programs. These included:

Region 1 — Multnomah County;
Region 2 — Clackamas and Washington Counties;
Region 3 — Willamette Valley and Central and Northern Coast (counties of Benton, Clatsop, Columbia, Lane, Lincoln, Linn, Marion, Polk, Tillamook, and Yamhill);
Region 4 — Southern Oregon (counties of Coos, Curry, Douglas, Jackson, Josephine, and Klamath);
Region 5 — Eastern and Central Oregon (counties of Baker, Crook, Deschutes, Gilliam, Grant, Harney, Hood River, Jefferson, Lake, Malheur, Morrow, Sherman, Umatilla, Wallowa, Wasco, Union and Wheeler).

Stage 2: Schools were selected in each region to approximate the percentage of students in the sample proportionate to representation of the region to the total student population of the state. The schools were chosen randomly within regions after identifying sub-groups of schools to maintain proportional representation of small and large schools. Within the set of selected schools, the entire class of sixth, eighth, or eleventh graders was surveyed.

The sample this year (as in 1994) was designed to be representative of the entire state as well as representative of each region within the state.

School selection: Early in the spring semester a joint letter from the Office of Alcohol and Drug Abuse Programs (OADAP) and the Oregon Department of Education was sent to each selected school requesting its cooperation in participating in the survey. Following the receipt of the letter, telephone contact was made with each principal or district program coordinator by staff of the Office of Alcohol and Drug Abuse Programs, soliciting the participation of the selected school. In cases in which a school declined to participate, an alternate school, randomly pre-selected, was contacted.[1]

There were 44 sixth grade schools, 42 eighth grade schools, and 42 eleventh grade schools in the total sample. A total of 128 schools and 12,263 students were surveyed. Using exclusion criteria similar to that used for the national survey ("Monitoring the Future," Johnston et. al., 1985-1995), surveys that showed evidence of false responses were excluded. (See below.) This produced 11,586 useable surveys. (In 1994 we surveyed 131 schools and 11,564 students.)

Major Findings

Marijuana use is up for both the eighth and eleventh grades.

Cigarette use is up for both the eighth and eleventh grades.

Although still confined to a small percentage of students, some other illicit drugs such as cocaine and amphetamines are also up this year.

Nonetheless, the use of most illicit drugs is still below the levels found in the 1980's.

Sixth grade use of illicit drugs is the same or lower than in 1994.

Risk factors for alcohol, tobacco, and other drug use include peers that use, parental attitudes favorable to alcohol, tobacco and other drug use, adults in the community who use, and peer attitudes favorable to use.

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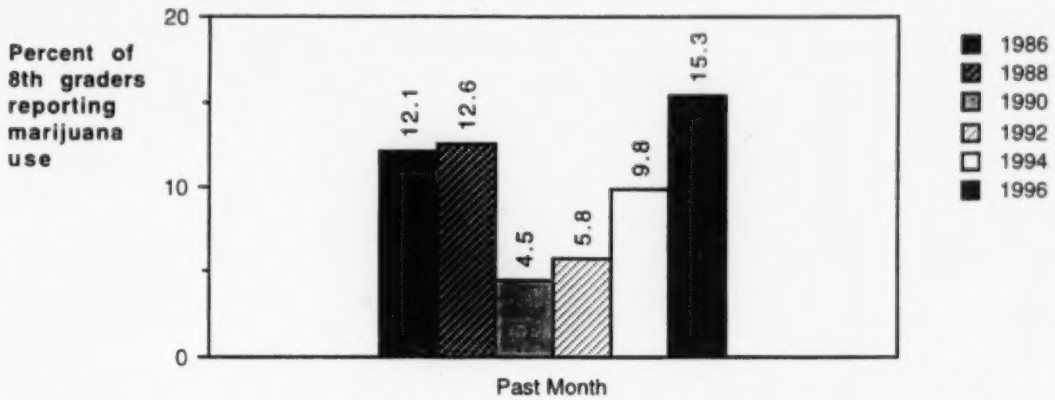
[1] It was necessary to replace approximately 40% of the original sample of schools because of refusals to participate. Replacement schools were chosen through a two-step process in which a pool of replacement schools was initially drawn with the original sample; schools were matched as closely as possible with characteristics of the schools they were replacing. Results of an analysis of the replacement schools show that they do not differ in a statistically significant manner in ALCOHOL, TOBACCO AND OTHER DRUG use from the schools that were part of the original sample.

Results

KEY FINDING #1 **Marijuana use among eighth grade students in Oregon has risen dramatically. Since 1990, recent (30 day) reported use of marijuana by eighth graders has tripled.**

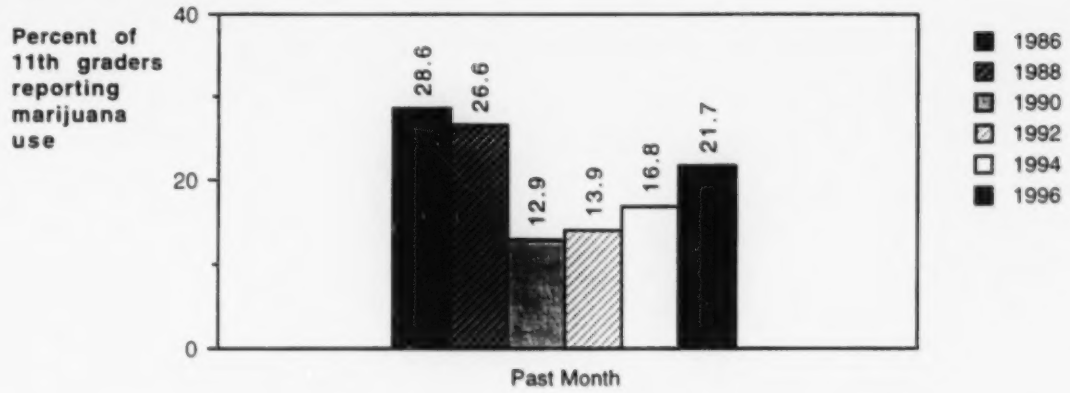
Figure 1
Oregon Prevalence Trends
Percent Reporting **Marijuana Use**
Eighth Grade



Use of marijuana declined substantially from 1986 to 1990, with a particularly dramatic drop between 1988 and 1990. However, since 1990, marijuana use has steadily increased with a substantial jump in 1996. **Reported past month use of marijuana by 8th graders more than tripled from 1990 to 1996. Marijuana use by eighth graders is now higher than it was in 1986.**

KEY FINDING #2 **Marijuana use among eleventh grade students in Oregon has risen dramatically. Since 1990, recent (30 day) reported use of marijuana by eleventh graders has increased 68%.**

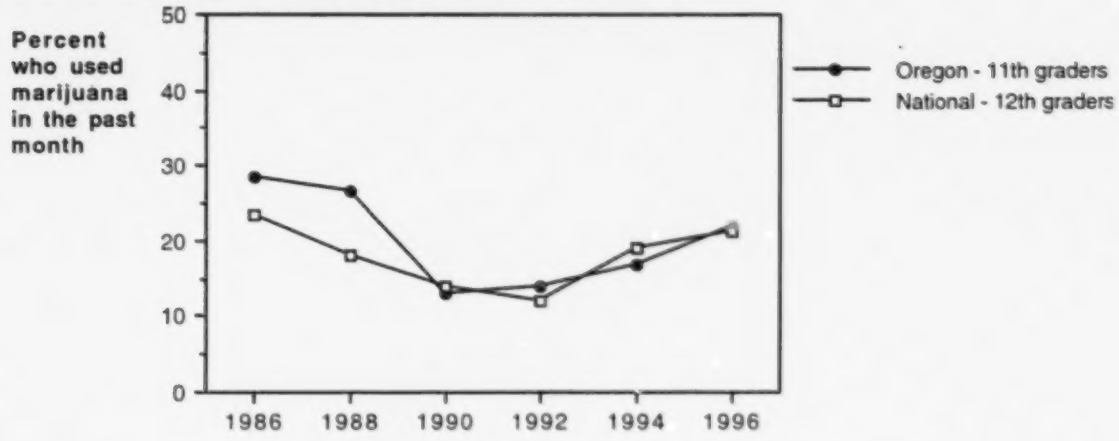
Figure 2
Oregon Prevalence Trends
Percent Reporting **Marijuana Use**
Eleventh Grade



The most important trend in these data is the increase in marijuana use. Marijuana use declined between 1986 and 1990. However, since 1990 the trend has been upward, with substantial increases in reported use in 1996.

KEY FINDING #3 The rise in reported marijuana use in Oregon mirrors the rise in national marijuana use.

Figure 3
30-Day Prevalence Trends
Oregon Trends/National Trends*
Percent Who Used **Marijuana in the Past Month**



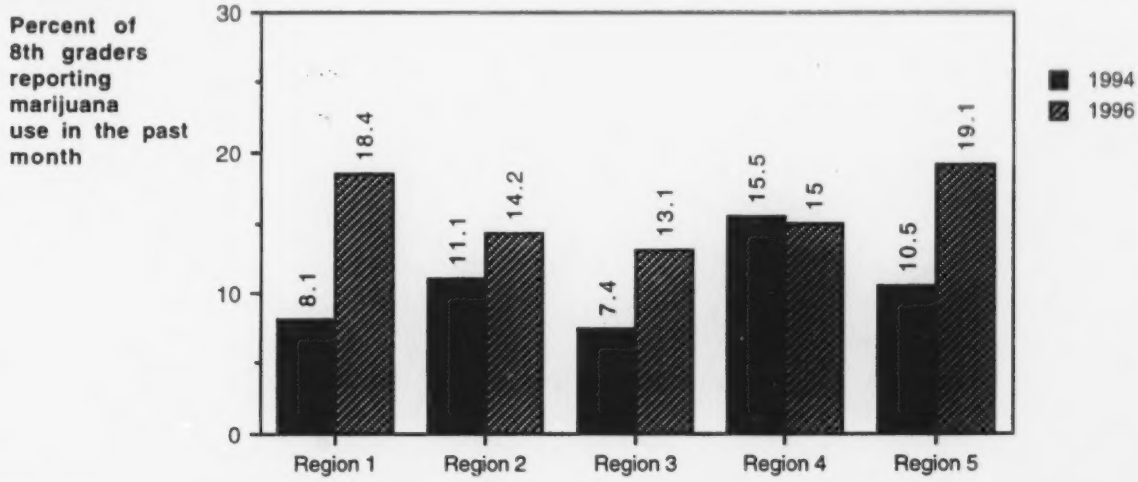
The decline in 30-day use that began in 1986, reversed for Oregon in 1990 and the nation in 1992. Since then the data have shown a steady increase in use at both the national and state levels. The percentage of Oregon eleventh graders who reported marijuana use in the past month has increased in 1996, up more than 29% since 1992 (from 16.8% to 21.7%).

From 1986 to 1988, the past month use of marijuana reported by Oregon eleventh graders exceeded the use by twelfth graders nationwide. However, in recent years, reported marijuana use by Oregon eleventh graders has been at levels similar to those reported by twelfth graders in the national survey.

*The national data for 1996 are from the 1995 survey since 1996 survey data are not yet available.

KEY FINDING #4 There are regional differences in the rise of marijuana use in Oregon.

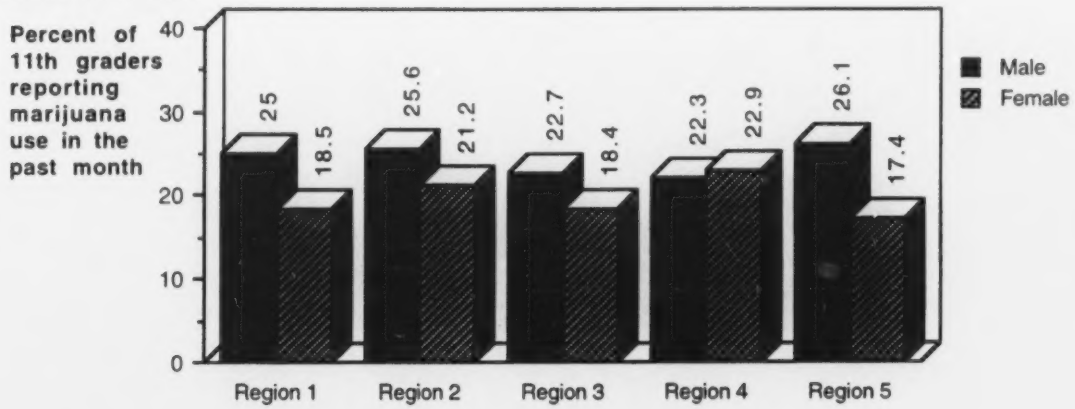
Figure 4
Oregon Prevalence Trends by Region
1994, 1996
Percent Reporting **Past Month Marijuana Use**
Eighth Grade



All regions except Region 4 showed a substantial and significant ($p<.05$) increase in reported past month marijuana use. Region 4 marijuana use has always been high (it previously was the highest) and in 1996 it remained high, while the other regions caught up to or surpassed it.

KEY FINDING #5 There are gender differences in marijuana use by region.

Figure 5
Marijuana Use by Gender by Region
Eleventh Grade

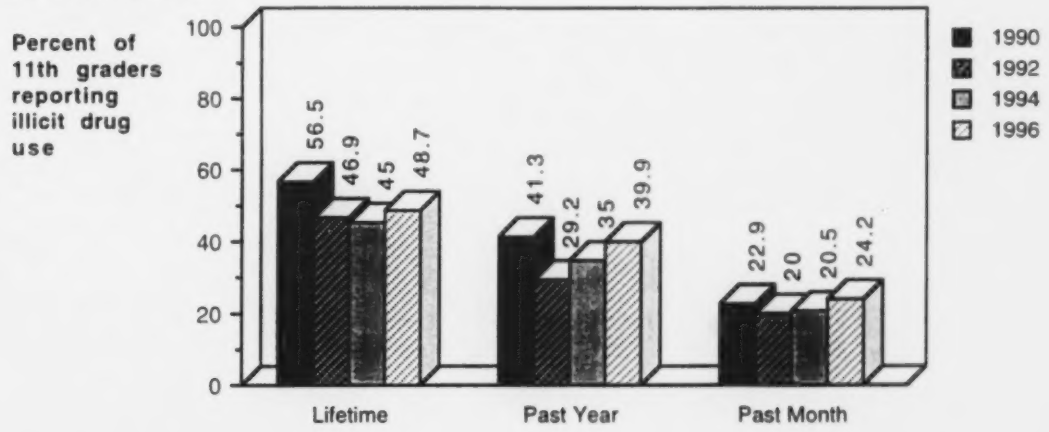


The reported use of marijuana by larger percentages of eleventh grade males than females is true in all regions but Region 4.

KEY FINDING #6 Recent (past month) illicit drug use by eleventh graders has increased about 21% since 1992.

One of the clearest indicators available to assess trends in the use of illicit drugs is the illicit drug index. It measures the percentage of students who used any illicit drug during a specified period of time and conversely measures the percentage of students who remained free of illicit drugs during that period of time.

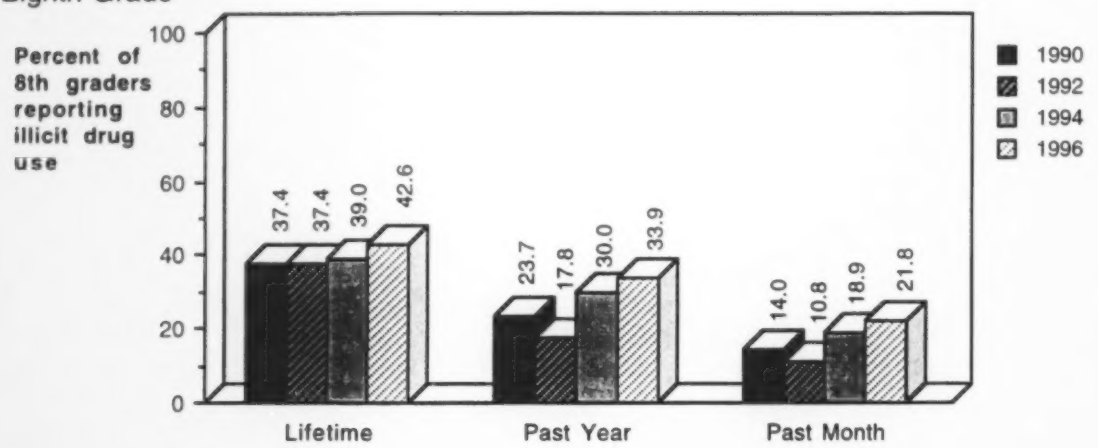
Figure 6
Illicit Drug Index
Eleventh Grade



The declines witnessed between the 1990 and the 1994 samples did not continue in 1996. Instead the percentage of eleventh graders who reported the use of any illicit drug has risen relative to both 1992 and 1994 for all time periods. **Recent (past month) illicit drug use by eleventh graders has increased about 21% since 1992** and percentages for 1996 actually surpass those from 1990.

KEY FINDING #7 Recent (past month) illicit drug use by eighth graders has doubled since 1992.

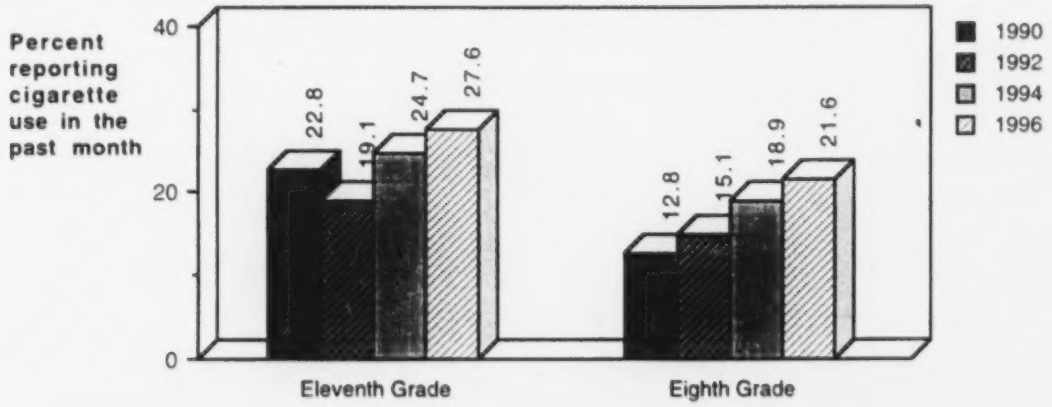
Figure 7
Illicit Drug Index
Eighth Grade



With the exception of a slight dip in illicit drug use in 1992 reported for annual and recent (30-day) use, there has been a rising drug use trend among eighth graders that continues with the 1996 sample. **Recent (past month) illicit drug use by eighth graders has doubled since 1992.** This increase is far greater than that reported by the eleventh graders.

KEY FINDING #8 **Cigarette use is also increasing for both the eighth and eleventh grades.**

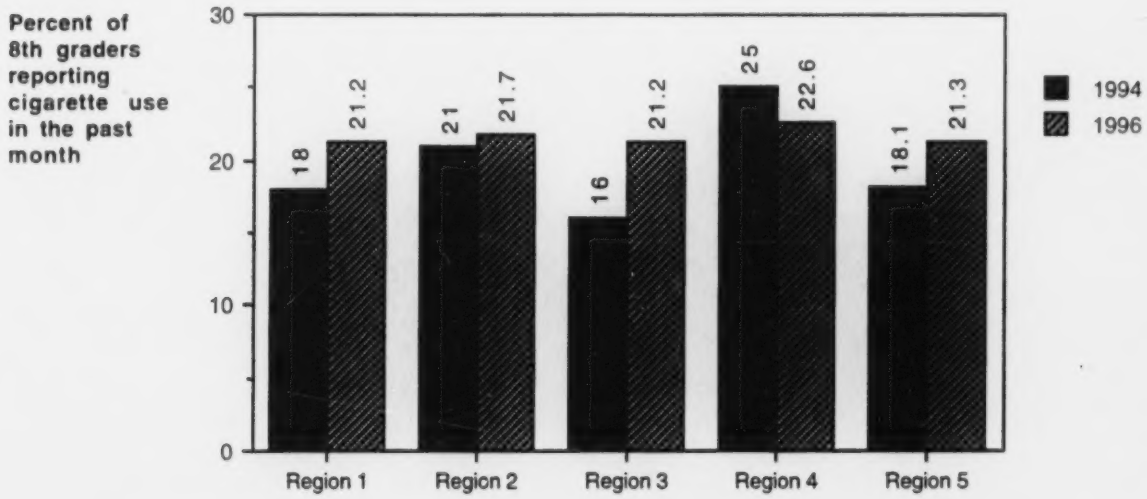
Figure 8
Oregon Prevalence Trends
Percent Reporting Past Month Cigarette Use
Eleventh and Eighth Grades



Eighth grade use of cigarettes in the past month is up by 14.3% this year and is up 69% since 1990. Recent (30 day) use of cigarettes for eleventh graders has increased 11.7% since 1994 and 45% since 1992.

KEY FINDING #9 There are regional differences in the rise of cigarette use.

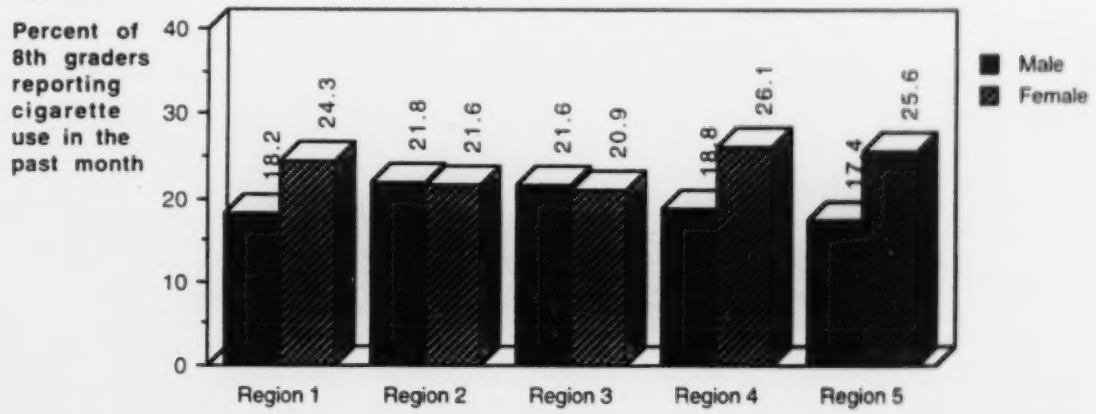
Figure 9
Oregon Prevalence Trends by Region
1994, 1996
Percent Reporting **Monthly Cigarette Use**
Eighth Grade



Region 3 experienced a significant increase ($p<.05$) in the percentage of eighth graders reporting past month use of cigarettes. Region 1 and Region 5 showed milder increases ($P<.10$). Region 4 however, experienced a decline ($p<.10$) in past month use. Nonetheless, Region 4 continues to have the highest percentages in the sample of eighth graders reporting past month use of cigarettes.

KEY FINDING #10 In some regions females are more likely to use cigarettes than males.

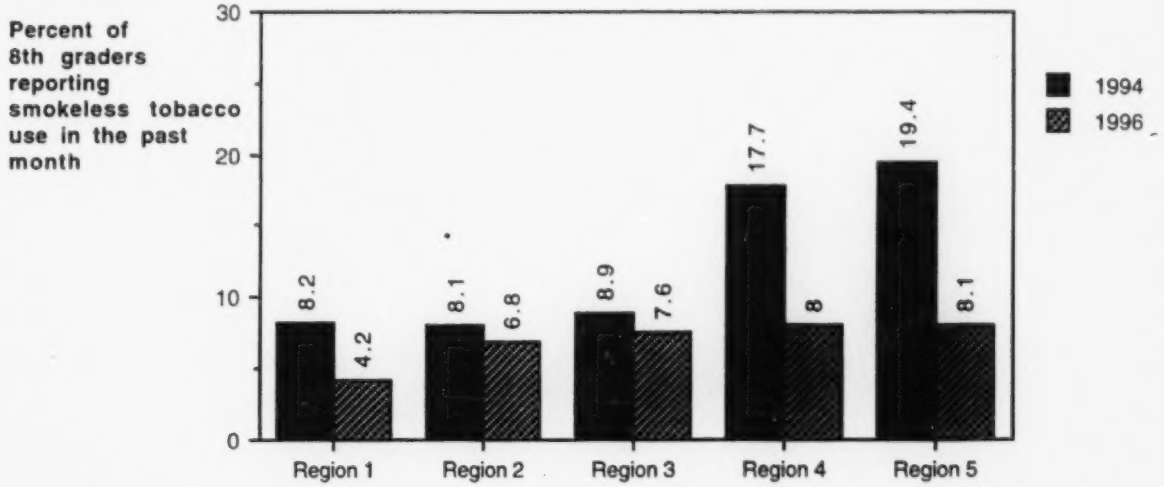
Figure 10
Cigarette Use by Gender by Region
Eighth Grade



The reported use of cigarettes statewide by greater percentages of eighth grade females than males is largely due to the differences in female and male cigarette use in Region 1, 4, and 5.

KEY FINDING #11 The use of smokeless tobacco has shown some decline particularly in Regions One, Four, and Five.

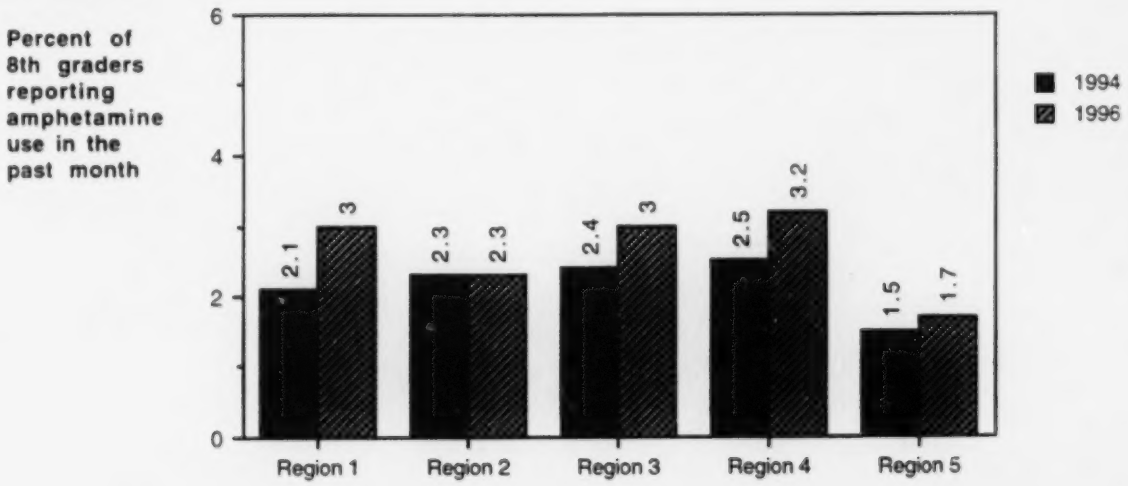
Figure 11
Oregon Prevalence Trends by Region
1994, 1996
Percent Reporting **Monthly Smokeless Tobacco Use**
Eighth Grade



All regions reported declines in smokeless tobacco use with Region 1, Region 4, and Region 5 reporting substantial and statistically significant declines. Smokeless tobacco appears to be loosing favor as an eighth grade habit. It may be that part of the decline is attributable to some eighth graders switching to smoking cigarettes.

KEY FINDING #12 Although still confined to relatively small numbers of students, amphetamine use is on the rise in most regions of the state.

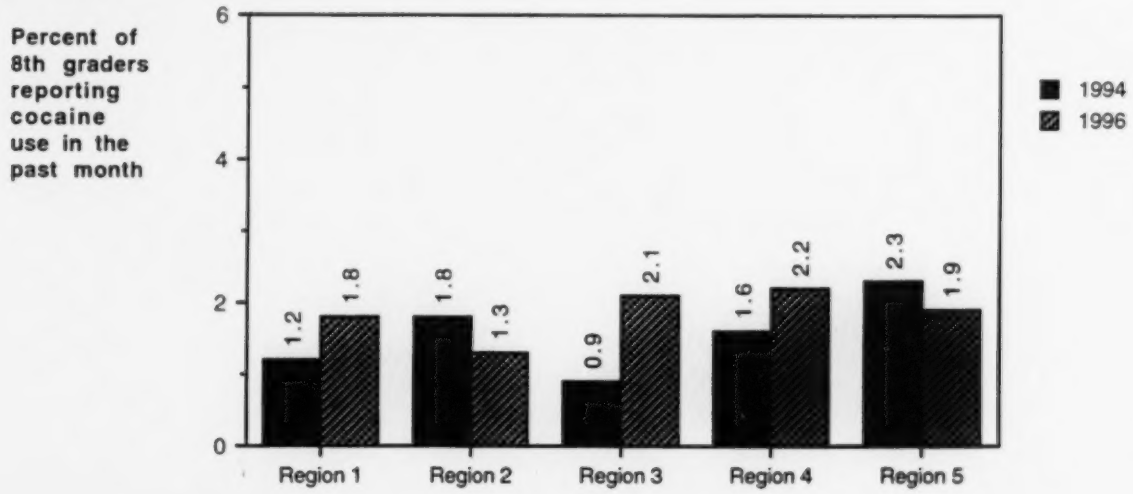
Figure 12
Oregon Prevalence Trends by Region
1994, 1996
Percent Reporting **Monthly Amphetamine Use**
Eighth Grade



Amphetamine use has risen in all regions but Region 2. Region 1, 3, and 4 have substantial and significant increases.

KEY FINDING #13 Although still confined to relatively small numbers of students, cocaine use is on the rise in many regions of the state.

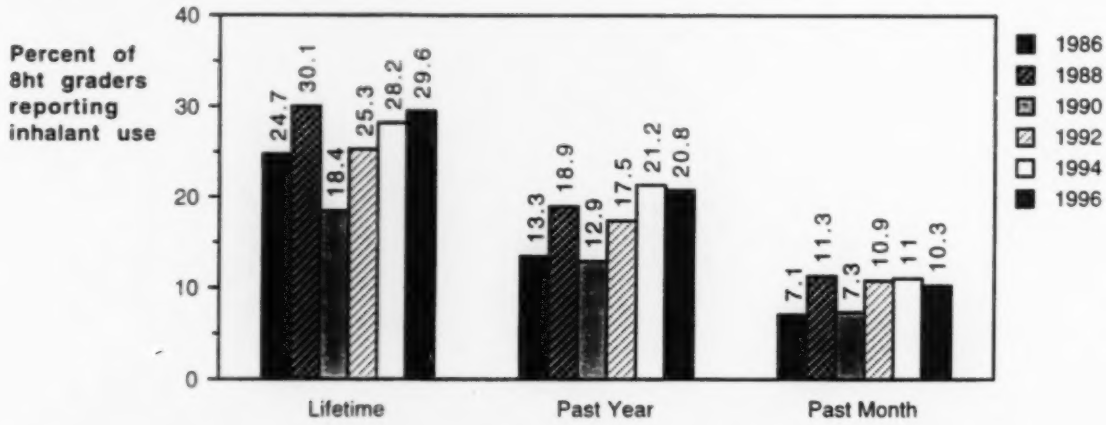
Figure 13
Oregon Prevalence Trends by Region
1994, 1996
Percent Reporting **Monthly Cocaine Use**
Eighth Grade



Statewide, percentages of students reporting past month cocaine use are higher in 1996 than they were in 1994. Regions 1, 3, and 4 showed some substantial and significant increases in use, while Region 2 and Region 5 showed some decreases. In Region 3 there was a particularly dramatic increase in the percentage of eighth graders reporting past month cocaine use, a twofold increase in a single year.

KEY FINDING #14 Inhalant use among eighth graders has remained at the same high levels of two years ago.

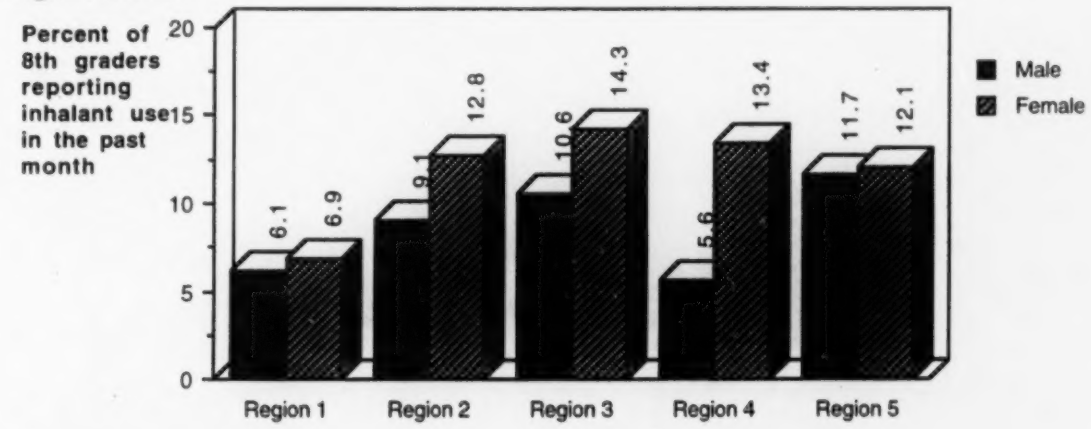
Figure 14
Oregon Prevalence Trends
Percent Reporting **Inhalant Use**
Eighth Grade



Increasing inhalant use among eighth graders has been a serious problem identified in previous surveys. From 1990 to 1994 eighth grade self-reported inhalant use exceeded marijuana use. In 1996, the percentage of eighth graders who reported lifetime use of inhalants continues the increasing trend that began in 1992. However, reported use in the past year and in the past month are down slightly from 1994, suggesting that the efforts to create awareness among this age level about the dangers of inhalant use have been effective, or perhaps that the increase in marijuana use has somehow taken away from the allure of inhalants (or that both explanations are true). In any case, inhalants remain a major drug used by this age group.

KEY FINDING #15 Inhalant use is higher among eighth grade females than among eighth grade males.

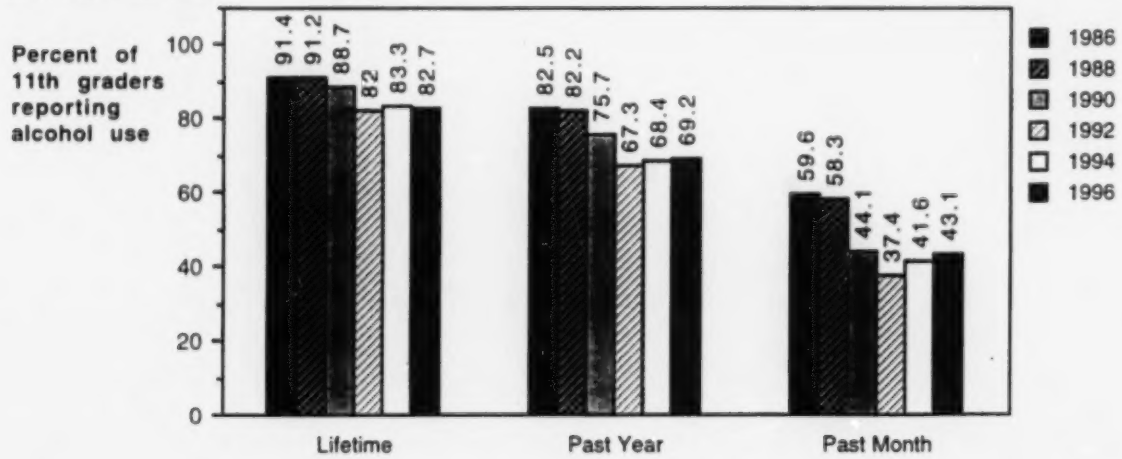
Figure 15
Inhalant Use by Gender by Region
Eighth Grade



The statewide data show that eighth grade females are more likely to be inhalant users than eighth grade males. This figure demonstrates that it is particularly true in Regions 2, 3 and 4.

KEY FINDING #16 **Alcohol use, although below the levels reported in the 1980's, has remained at the same relatively high levels over the past few years.**

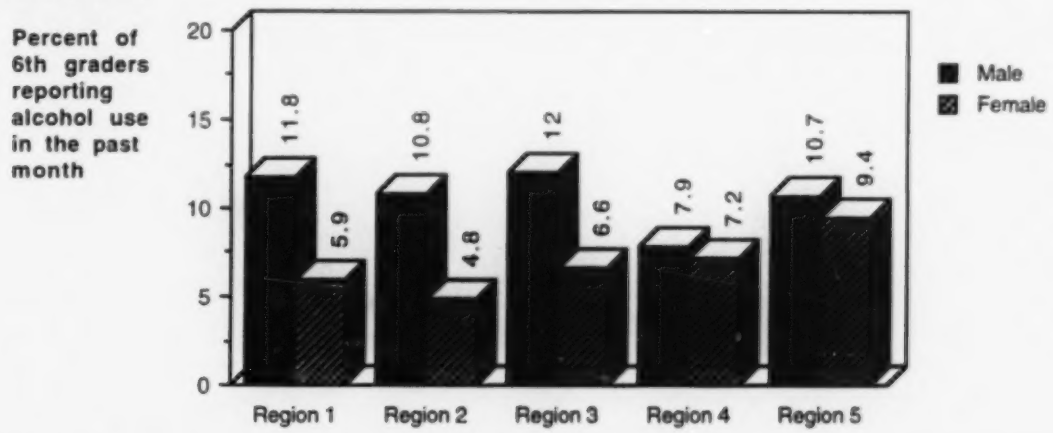
Figure 16
Oregon Prevalence Trends
Percent Reporting **Alcohol Use**
Eleventh Grade



Alcohol use is still below the highs it reached in the 1986–1988 period, but since 1992, reported use has been slowly climbing and the trend is clearly upward rather than downward. Nonetheless, between 1994 and 1996 alcohol use among eleventh graders has remained relatively stable.

KEY FINDING #17 **There is a significant gender difference among sixth graders who reported the use of alcohol in the past month.**

Figure 17
Alcohol Use by Gender by Region
Sixth Grade



In Region 1, Region 2, and Region 3, percentages of sixth grade males far surpass percentages of females in their reported past month alcohol use.

RISK FACTORS FOR DRUG USE

Exploring the Factors that Influence Drug Use: Risk and Protective Factor Questions

In 1994 the statewide survey included a large number of questions addressing issues around school, community, family, and peers. These were developed by the Social Development Research Group of the University of Washington as part of a process of developing useful scales in each of the major domains of the risk and protective factor model of Hawkins and Catalano.[2]

Since the administration of the questionnaire in Oregon in 1994, the Social Development Research Group has been working on the development of those scales. The result of this effort was a shorter questionnaire for 1996 that contained only scale items that in 1994 predicted Oregon student alcohol, tobacco, and other drug use. Therefore, this year we are able to examine not only the influence of individual scale items as we did two years ago, but the scales themselves. The scales are listed below with each of its component
questions.

Risk Factor Scales

Community rewards for conventional involvement

-my neighbors notice when I am doing a good job and let me know
-people in my neighborhood are proud of me when I do something well
-people in my neighborhood encourage me to do my best

Community laws and norms favorable to alcohol, tobacco, and other drug use

-kids smoking marijuana in my neighborhood would be caught by police
-kids drinking alcohol in my neighborhood would be caught by police
-kids carrying a handgun in my neighborhood would be caught by police
-how wrong do adults in your neighborhood think it is for a kid your age to use marijuana
-how wrong do adults in your neighborhood think it is for a kid your age to use alcohol
-how wrong do adults in your neighborhood think it is for a kid your age to use cigarettes

Low neighborhood attachment

-if I had to move, I would miss the neighborhood I now live in

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[2] Hawkins, J. David, Catalano, R. & Miller, J. "Risk and Protective Factors for Alcohol and Other Drug Problems in Adolescence and Early Adulthood: Implications for Substance Abuse Prevention." Psychological Bulletin 112 (1992): 64-105.

-I like my neighborhood
-I'd like to get out of my neighborhood

Community perceived availability of alcohol, tobacco and other drugs
-how easy would it be to get beer, wine or hard liquor
-how easy would it be to get cigarettes
-how easy would it be to get cocaine, LSD, or amphetamines
-how easy would it be to get marijuana
-how easy would it be to get a handgun

High community disorganization
-my neighborhood is described by crime/drug sales
-my neighborhood is described by fights
-my neighborhood is described by lots of empty or abandoned buildings
-my neighborhood is described by lots of graffiti

Community transitions and mobility
-have you changed homes in the past year
-have you changed schools in the past year
-how many times have you changed homes since kindergarten
-how many times have you changed schools since kindergarten

Family attachment
-do you feel close to your mother
-do you share your thoughts and feelings with your mother
-do you feel close to your father
-do you share your thoughts and feelings with your father

Family opportunities for involvement
-my parents ask me what I think before most family decisions affecting me are made
-if I had a personal problem, I could ask my mom or dad for help
-my parents give me lots of chances to do fun things with them

Family rewards for conventional involvement
-my parents notice when I am doing a good job and let me know about it
-how often do your parents tell you they are proud of your for something you have done
-do you enjoy spending time with your mother
-do you enjoy spending time with your father

Parental attitudes favorable to alcohol, tobacco and other drugs
-how wrong do your parents feel it would be for you to regularly drink beer, wine or hard liquor
-how wrong do your parents feel it would be for you to regularly smoke cigarettes
-how wrong do your parents feel it would be for you to regularly smoke marijuana

-how wrong do your parents feel it would be for you to steal anything worth more than $5.00
-how wrong do your parents feel it would be for your to draw graffiti, or write things, or draw pictures on buildings or other property without owner's permission
-how wrong do your parents feel it would be for you to pick a fight with someone

Family history of antisocial behavior
(This scale has been split into two parts to reflect first, the family history of anti-social behavior, and second, to show contact with anti-social members of the community that may include more than family members)

Family anti-social behavior
-has anyone in your family ever had a severe alcohol problem
-have any of your siblings ever drunk beer, wine, or hard liquor
-have any of your siblings ever smoked marijuana
-have any of your siblings ever smoked cigarettes
-have any of your siblings ever taken a handgun to school
-have any of your siblings ever been suspended or expelled from school

Community antisocial behavior
-how many adults have you known personally who in the past year have used marijuana, crack, cocaine, or other drugs
-how many adults have you known personally who in the past year have sold or dealt drugs
-how many adults have you know personally who in the past year have done things that could get them in trouble with the police like stealing, selling stolen goods, mugging, or assaulting others
-how many adults have you known personally who in the past year have gotten drunk or high

High family conflict
-people in my family lose their temper
-people in my family sometimes hit each other when they are mad
-we fight a lot in our family

Poor family discipline
-if you skipped school would you be caught by your parents
-if you carried a handgun without your parents' permission, would you be caught by your parents
-if you drank beer, wine, or liquor without your parents' permission, would you be caught by your parents

Poor family management
-the rules in my family are clear
-my parents ask if I have gotten my homework done
-when I am not at home, one of my parents knows where I am and whom I am with

-would your parents know if you did not come home on time
-my parents want me to call if I'm going to be late getting home
-my family has clear rules about alcohol and drug use

Peer—individual belief in moral order

-it is all right to beat up people if they start the fight
-I think sometimes it is okay to cheat at school
-I think it is okay to take something without asking, if I can get away with it

Peer—individual social skills

-Story problem about visiting another part of town where you don't know anyone. What would you say or do if a teenager about your size is walking toward you and as he is about to pass you, he deliberately bumps into you and you almost lose your balance.
-Story problem about discussion with mother at 8:00 on a week night about going to a friend's home to "hang out." Mother says "you'll just get into trouble if you go out. Stay home tonight." What would you do?
-Story problem about being in a music store with a friend who slips a CD under her coat then wants to know "which one do you want? Go ahead, take it while nobody's around." What do you do now?
-Story problem about being at a party when one of your friends offers you a drink containing alcohol. What do you say or do?

Peer—individual attitudes favorable to anti-social behavior

--how wrong do you think it is for someone your age to steal anything worth more than $5.00
-how wrong do you think it is for someone your age to pick a fight with someone
-how wrong do you think it is for someone your age to take a handgun to school
-how wrong do you think it is for someone your age to attack someone with the idea of seriously hurting them

Peer—individual attitudes favorable to alcohol, tobacco, and other drug use

-how wrong do you think it is for someone your age to smoke cigarettes
-how wrong do you think it is for someone your age to use LSD, cocaine, amphetamines, or another illegal drug
-how wrong do you think it is for someone your age to smoke marijuana
-how wrong do you think it is for someone your age to regularly drink beer, wine, or hard liquor

Peer—individual: anti-social behavior

-how many times in the past year have you been suspended from school
-how many times in the past year have you carried a handgun
-how many times in the past year have you sold illegal drugs
-how many times in the past year have you been arrested
-how many times in the past year have you attacked someone with the idea of

seriously hurting them
-how many times in the past year have you been drunk or high at school
-how many times in the past year have you taken a handgun to school

Peer—individual: peer anti-social behavior
-how many of your four best friends have been suspended from school in the past year
-how many of your four best friends have carried a handgun in the past year
-how many of your four best friends have sold illegal drugs in the past year
-how many of your four best friends have dropped out of school in the past year
-how many of your four best friends have been arrested in the past year

Peer—individual: peer alcohol, tobacco, and other drug use
-how many of your four best friends smoked cigarettes in the past year
-how many of your four best friends used LSD, cocaine, amphetamines, or other illegal drugs in the past year
-how many of your four best friends used marijuana in the past year
-how many of your four best friends in the past year tried beer, wine, or liquor when their parents didn't know about it

Peer—individual: rebelliousness
-in the past year have you ignored rules that get in your way
-in the past year have you seen how much you can get away with
-in the past year have you done the opposite of what people tell you to, just to get them mad

Peer—individual: rewards for anti-social involvement
-would you be seen as "cool" if you smoked cigarettes
-would you be seen as "cool" if you began drinking alcoholic beverages regularly
-would you be seen as "cool" if you smoked marijuana
-would you be seen as "cool" if you carried a handgun

Peer—individual: sensation seeking
-how many times have you done what feels good, no matter what
-how many times have you done something dangerous because someone dared you to do it
-how many times have you done crazy things, even if they are a little dangerous

School opportunities for involvement
-in my school, students have lots of chances to help decide things like class activities and rules
-there are lots of chances for students in my school to talk with a teacher one-on-one

School rewards for conventional involvement
-the school lets my parents know when I have done something well

-my teacher(s) notices when I am doing a good job and lets me know about it

Low school commitment

-I want very much to go to college after high school
-I try hard to do good work in school
-it is important to me to get good grades

School academic failure

-putting them all together, what were your grades like last year

Discriminant Analysis

The purpose of this analysis is to provide to the Office of Alcohol and Drug Abuse Programs some illustrations of the associations between student risk factors and alcohol, tobacco, and other drug use. We hope that this will provide information to those at state and community levels to aid in the formulation of prevention strategies based on the risk and protective factors that influence student alcohol, tobacco, and other drug use.

The following method was utilized for examination of the scales. First, individual items in the questionnaire were combined into their appropriate scales. Second, utilizing a statistical strategy called discriminant function analysis, the relative importance of these scale items in predicting alcohol, tobacco, and other drug use was determined. This approach divides the samples into two groups: those who engaged in a problem behavior (e.g., reported smoking marijuana in the past month) and those that did not. The other questionnaire items are then asked to "predict" a student's membership in one of those two groups. We basically look for the risk and protective factor scales which do the best job of accurately classifying a student as a user or a non-user. Since the influence of the scales and items are taken altogether, we are able to find the best combination of risk and protective factors that will most effectively predict alcohol, tobacco, and other drug use.

RISK FACTOR RESULTS

KEY FINDING #18 **Using a Discriminant Function Analysis, a similar model emerges for each grade to predict the relative importance of risk factors in marijuana use.**

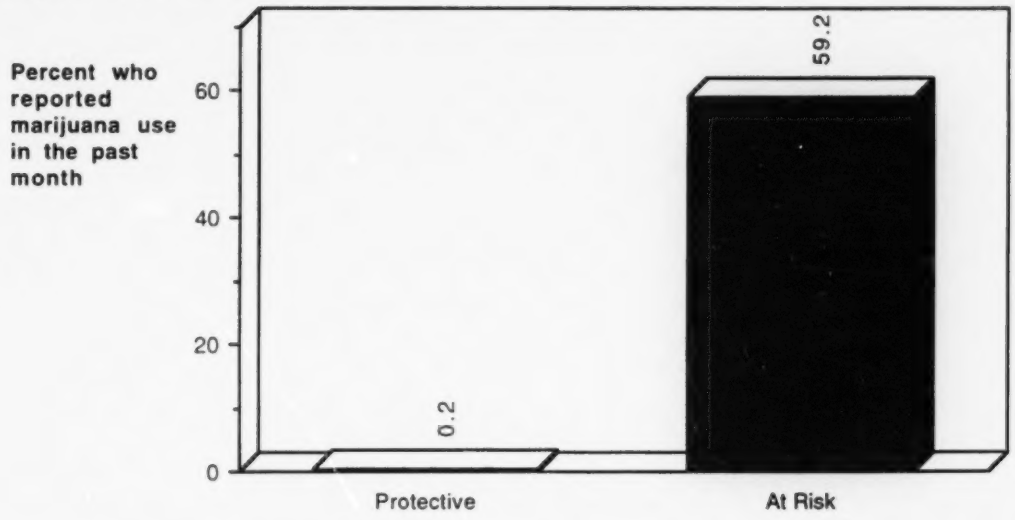
The eighth grade model is as follows:

1. Peer use of alcohol, tobacco, and other drugs
2. Anti-social behavior in the last 12 months
3. Adults in neighborhood use alcohol, tobacco, and other drugs
4. Parental attitudes favorable to ATOD use
5. Early use of cigarettes and alcohol
6. Community rewards for conventional involvement—"neighbors care" (protective)
7. Peer rewards to alcohol, tobacco, other drug use—seen as "cool"if I use drugs
8. High community disorganization
9. High family conflict

The model correctly classified 91% of eighth grade respondents as either marijuana users or non-users. By looking at a student's responses on these scale items we were able to predict accurately whether or not they were past month marijuana users 91% of the time. In other words, these factors are the most predictive (from our data) of past month marijuana use for eighth graders.

KEY FINDING #19 **Using three of the top risk factors for marijuana use, of those eighth graders who had the most protective scores, less than .2 of 1% reported that they used marijuana. Of those who had a combination of these three risk factors, nearly 60% reported that they used marijuana.**

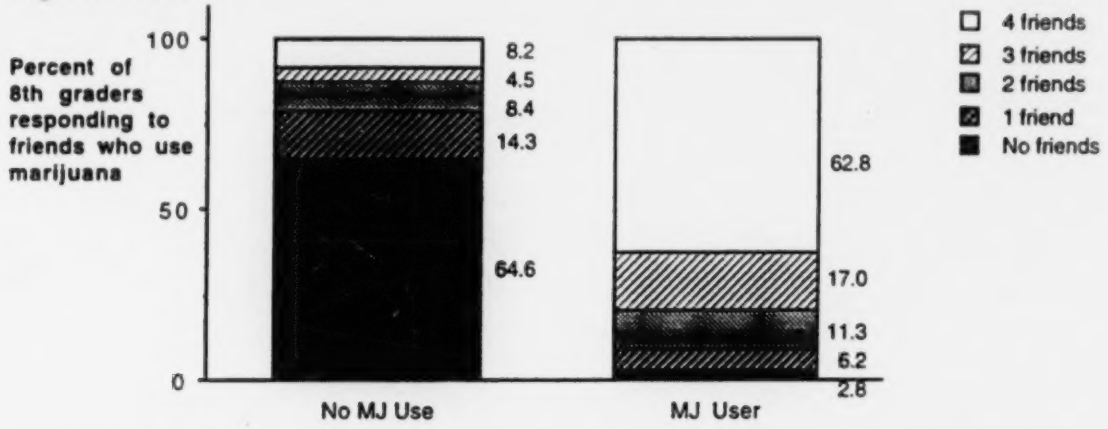
Figure 19
Discriminant Function Analysis
Marijuana Use
Eighth Grade Model



By selecting three risk factors from the model: peer use of alcohol, tobacco and other drugs, adults in the neighborhood who use alcohol, tobacco and other drugs, and parental attitudes favorable to alcohol, tobacco, and other drugs, protected and at risk students can be identified. Of those eighth graders who did not have friends who used marijuana, who did not know adults in their neighborhoods who use alcohol, tobacco, and other drugs and whose parents did not have favorable opinions on alcohol, tobacco, and other drug use, only 0.2% reported that they used marijuana in the past month. Of those who had at least one friend who used marijuana in the past month, who knew adults in their neighborhoods who use alcohol, tobacco, and other drugs, and whose parents have less than very strong anti-marijuana attitudes, almost 60% reported that they used marijuana in the past month.

KEY FINDING #20 Having friends who use marijuana is a major predictor of marijuana use.

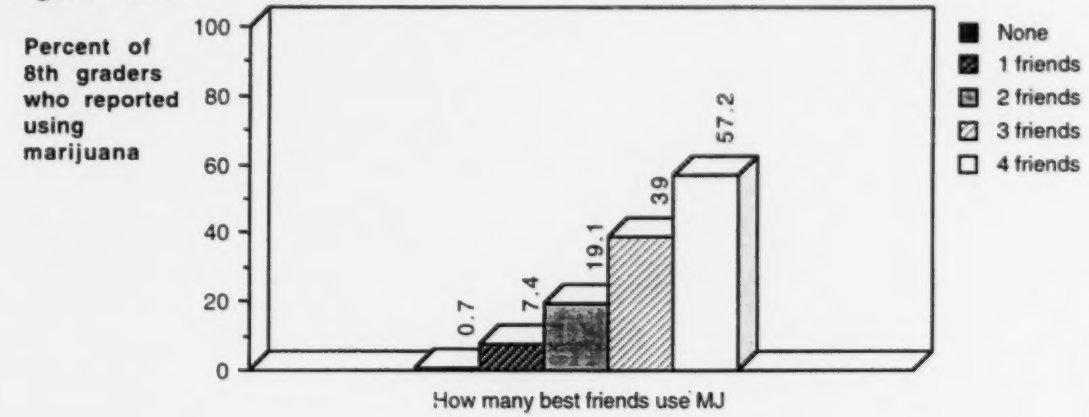
Figure 20
Risk Factors for **Using Marijuana**
Number of Friends Who Use Marijuana
Marijuana non-users vs.users
Eighth Grade



Of those eighth graders who reported that they did not use marijuana (past month), almost two-thirds (64.5%) reported that they have no best friends who use. Of those who reported that they did use marijuana (past month) only a tiny percentage (2.8%) reported that they have no best friends who use marijuana. Nearly 63% of the marijuana users reported that all four of their best friends are users. Eighth grade marijuana users and non-users appear to have very separate friendship groups, non-users associating primarily with non-users, and users associating with users.

KEY FINDING #21 **For eighth graders, the risk of being a marijuana user increases ten-fold with even one best friend who is a marijuana user.**

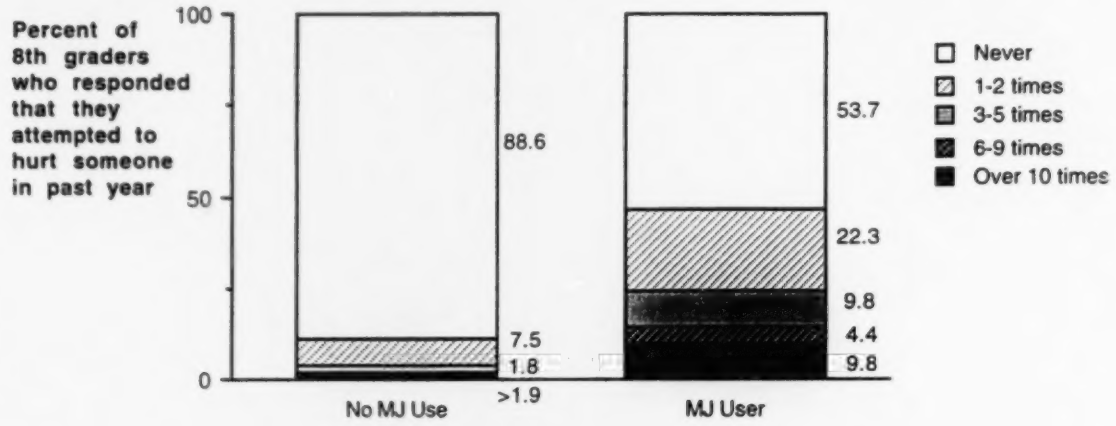
Figure 21
Risk Factors for **Using Marijuana**
Best Friends Who Use Marijuana
Eighth Grade



Another way of examining the correlation between friends who use marijuana and marijuana use is to examine the relative risk that you will be a marijuana user if you have friends who use. Only 0.7% of the eighth graders who said that they have no best friends who use marijuana reported that they used it themselves in the past month. With only one best friend who uses marijuana, the percent of respondents who reported that they used it increases to more than 7%. Over 57% of those eighth graders who reported that they have four or more friends who use marijuana also reported using it themselves in the past month. For eighth graders, the difference between those who have no best friends who use and those with four or more best friends who use is an eighty-twofold increase in the risk of the respondent also using marijuana. The risk of being a marijuana user increases ten-fold with even one best friend who is a marijuana user.

KEY FINDING #22 **Marijuana users were much more likely than non-users to report that they are involved in anti-social and violent behaviors.**

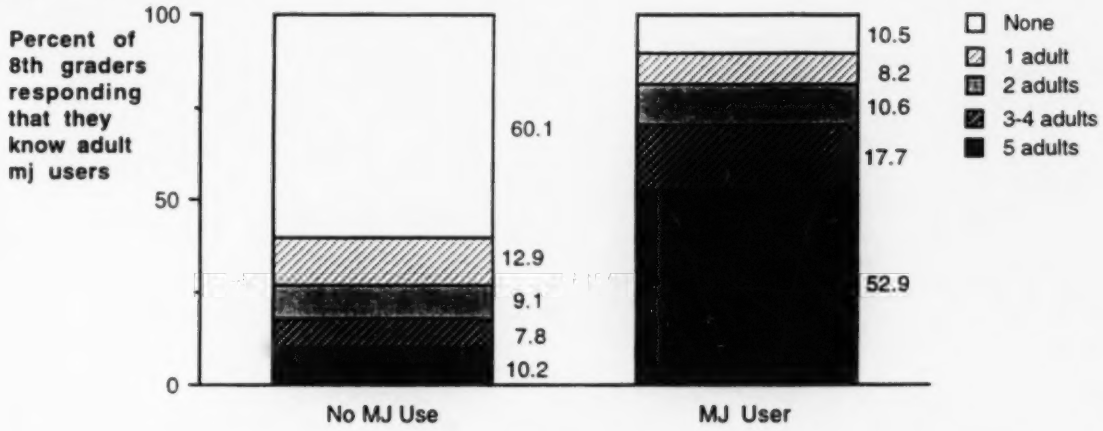
Figure 22
Risk Factors for **Using Marijuana**
Number of Times Respondent Attacked Someone to Hurt Them (Past Year)
Marijuana Users vs. Non-Users
Eighth Grade



Of those eighth graders who reported that they did not use marijuana (past month), only 11% reported any violent behavior. Of those who reported using marijuana nearly half (46%) reported that they engaged in some violent behavior toward others.

KEY FINDING #23 Knowing adults that use marijuana is a major predictor of marijuana use.

Figure 23
Risk Factors for **Using Marijuana**
Knowing Personally Adults Who Use Drugs
Marijuana non-users vs.users
Eighth Grade

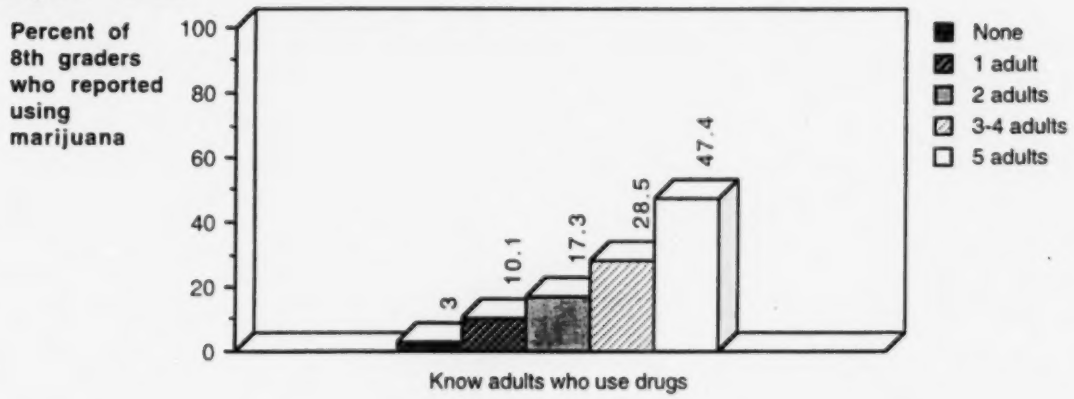


About 60% of non-users reported knowing no adults who use illegal drugs. Only about 10% reported knowing five or more adults who use illegal drugs. On the other hand, of those who reported that they are marijuana users, over half responded that they know five or more adults who use illegal drugs. Clearly, knowing adults who model illegal drug use is a risk factor for marijuana use.

For the entire sample of eighth graders, 16.7% reported knowing five or more adults who use drugs while 52.5% reported that they do not know any adult drug users

KEY FINDING #24 **Knowing even one adult (an aunt, uncle, parent, neighbor, etc.) who uses an illegal drug triples the risk of eighth grade marijuana use (from 3% to 10.1%).**

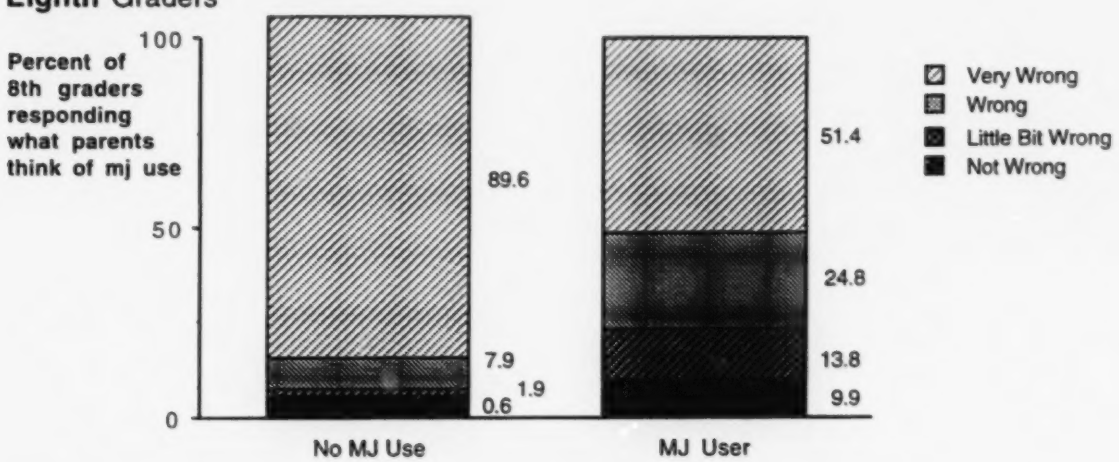
Figure 24
Risk Factors for **Using Marijuana**
Knowing Personally Adults Who Use Drugs
Eighth Grade



Over 47% of the eighth graders who said that they know five or more adults who use marijuana, crack, cocaine, or other drugs, reported that they used marijuana in the past month. Of those who said they do not know any adults who use marijuana or other drugs, just 3% reported that they used marijuana in the past month. Knowing even one adult (an aunt, uncle, parent, neighbor, etc.) who uses an illegal drug triples the risk of eighth grade marijuana use (from 3% to 10.1%).

KEY FINDING #25 **Eighth graders who do not use marijuana are more likely to report that their parents hold very strong attitudes against marijuana.**

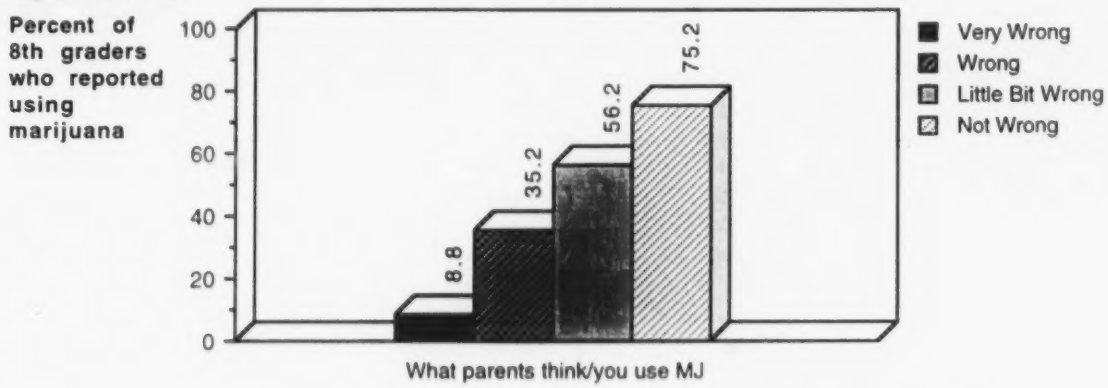
Figure 25
Risk Factors for **Using Marijuana**
What Parents Think About You Using Marijuana
Marijuana non-users vs.users
Eighth Graders



Nine of every ten (89.6%) eighth graders who reported that they do not use marijuana reported that their parents think it would be very wrong for a child their age to use marijuana. On the other hand, only half of those who reported that they used marijuana reported that their parents had such firm negative opinions about marijuana use.

KEY FINDING #26 **Eighth graders who use marijuana are more likely to report that their parents are not strongly opposed to marijuana use.**

Figure 26
Risk Factors for **Using Marijuana**
What Parents Think About Someone Your Age Using Marijuana
Eighth Grade

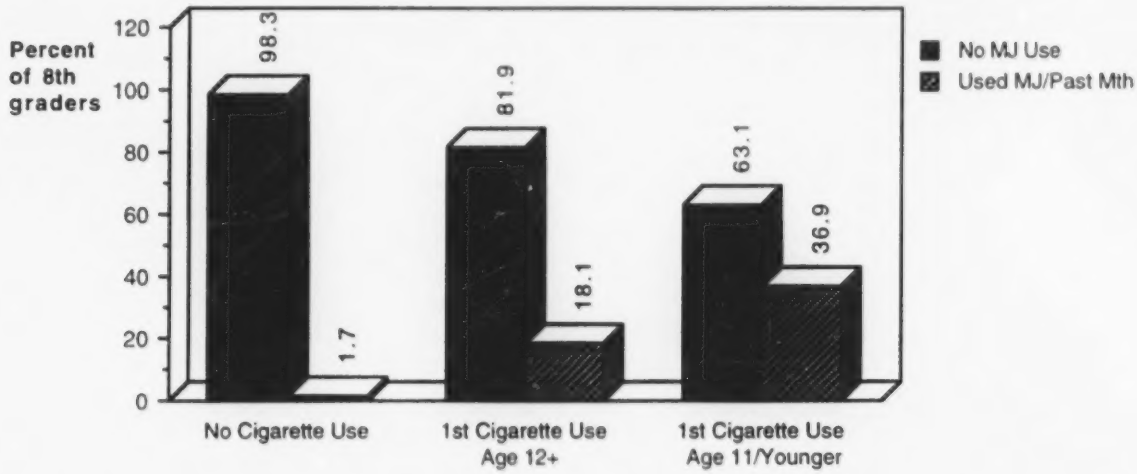


The relative risk of use shows this clearly. Only about 9% of the eighth grade students who responded that their parents believe it is very wrong for eighth graders to use marijuana, reported that they used it during the past month. The number escalates to 35% of those respondents who reported that their parents believe it is somewhat wrong and climbs to over 75% of those who reported that their parents do not believe it is wrong at all for them to use marijuana. Clearly, the significantly lower rate of marijuana use is correlated with parents who are firm in their belief that its use is very wrong and who communicate that belief to their children. Eighth graders who reported that their parents classify marijuana use as only "wrong" rather than "very wrong" have nearly four times the rate of marijuana use.

Almost 16% of the total eighth grade sample reported that their parents think it is something less than "very wrong" for an eighth grader to use marijuana.

KEY FINDING #27 Early use of cigarettes is linked to an increase in subsequent marijuana use.

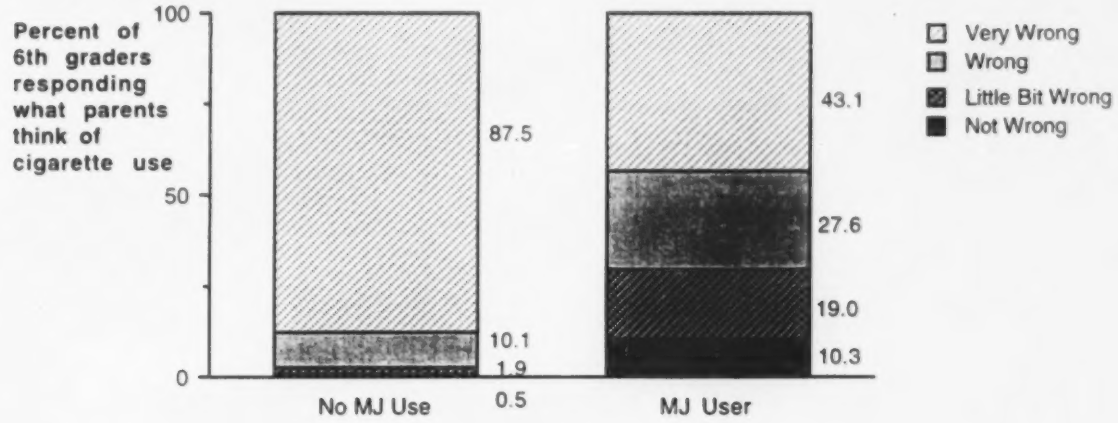
Figure 27
Risk Factors for **Using Marijuana**
Early Use of Cigarettes
Eighth Grade



The association between early cigarette use and marijuana use is particularly strong in the eighth grade. Of those eighth graders who responded that they have not smoked cigarettes (ever), only 1.7% reported using marijuana (past month). Of those who reported that they started to smoke cigarettes at a young age (11 or younger), nearly 37% reported past month use of marijuana. **This is a twenty-twofold increase in risk of marijuana use.**

KEY FINDING #28 **Sixth grade students are less likely to be marijuana users if they reported that their parents are strongly opposed to sixth graders smoking cigarettes.**

Figure 28
Risk Factors for **Using Marijuana**
What Parents Think About Someone Your Age Smoking Cigarettes
Marijuana non-users vs.users
Sixth Grade



One of the items on the Parental Attitudes Favorable to Alcohol, Tobacco, and Other Drug Use scale is a question about what parents think about the student using cigarettes. This item is predictive of marijuana use as this illustration from the sixth grade demonstrates. Almost nine out of ten (87.5%) sixth graders who reported that they do not use marijuana indicated that their parents feel it is very wrong for them to smoke cigarettes. Nearly 60% of the those who responded that they used marijuana in the past month indicated that their parents have less than adamant anti-cigarette smoking attitudes.

KEY FINDING #29 Using a Discriminant Function Analysis, a model emerges for each grade to predict the relative importance of risk factors in cigarette use.

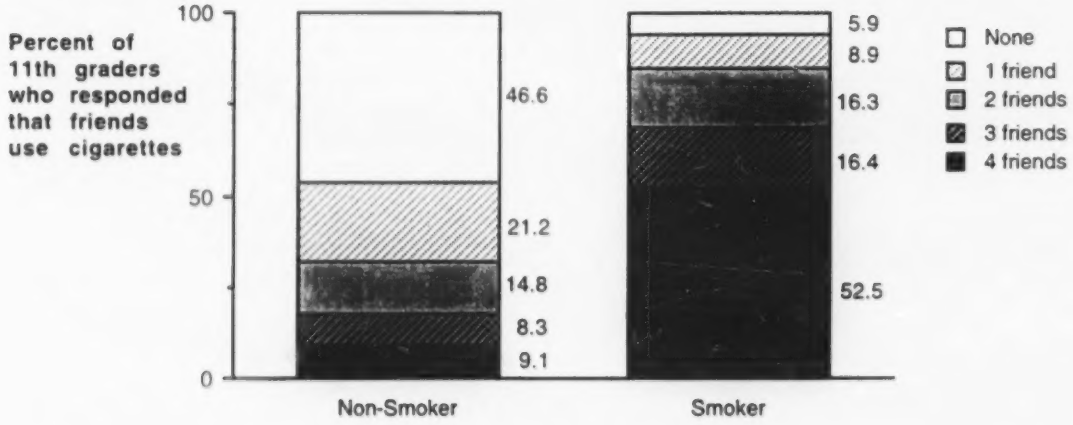
Eleventh Graders

1. Peer use of alcohol, tobacco, and other drugs
2. Attitudes favorable to alcohol, tobacco, and other drug use
3. Academic failure
4. Peer rewards to alcohol, tobacco, other drug use—seen as "cool"if I use drugs
5. Peer related social skills (protective)
6. School rewards for conventional involvement (protective)
7. Peer anti-social behavior
8. Anti-social behavior in the last 12 months
9. Poor family management
10. Parental attitudes favorable to alcohol, tobacco, and other drug use
11. Low school commitment
12. Attitudes favorable to anti-social behavior
13. Sensation seeking

The model correctly classified 81% of eleventh grade respondents as either cigarette users or non-users. By looking at a student's responses on these scale items we were able to predict accurately whether or not they were past month cigarette users 81% of the time. In other words, these factors are the most predictive of past month cigarette use for eleventh graders.

KEY FINDING #30 Having friends who use cigarettes is a major predictor of cigarette use.

Figure 30
Risk Factors for **Smoking**
Number of Friends Who Smoke Cigarettes
Cigarette Smokers vs. Non-Smokers
Eleventh Grade

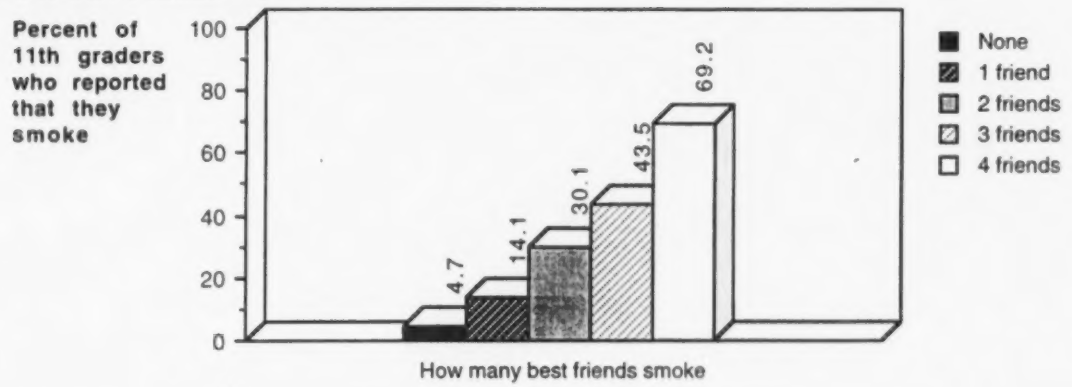


Of the eleventh graders who reported that they did not smoke cigarettes in the past month, nearly half (46.6%) reported that they have no best friends who smoke cigarettes. Of those who reported that they did smoke in the past month, only 5.9% reported that they have no best friends who do not smoke. Almost 53% of the eleventh graders who smoke reported that all four of their best friends are also smokers.

Of the entire eleventh grade sample, 35.2% reported that they have no friends who smoke cigarettes, 17.7% have just one cigarette using friend, 15.2% have two friends, 10.6% have three friends, and 21.3% have four or more friends who smoke cigarettes. Almost 65% of the entire eleventh grade sample has at least one best friend who is a cigarette smoker.

KEY FINDING #31 **For eleventh graders, the risk of being a cigarette user increases nearly three-fold with even one best friend who is a cigarette user.**

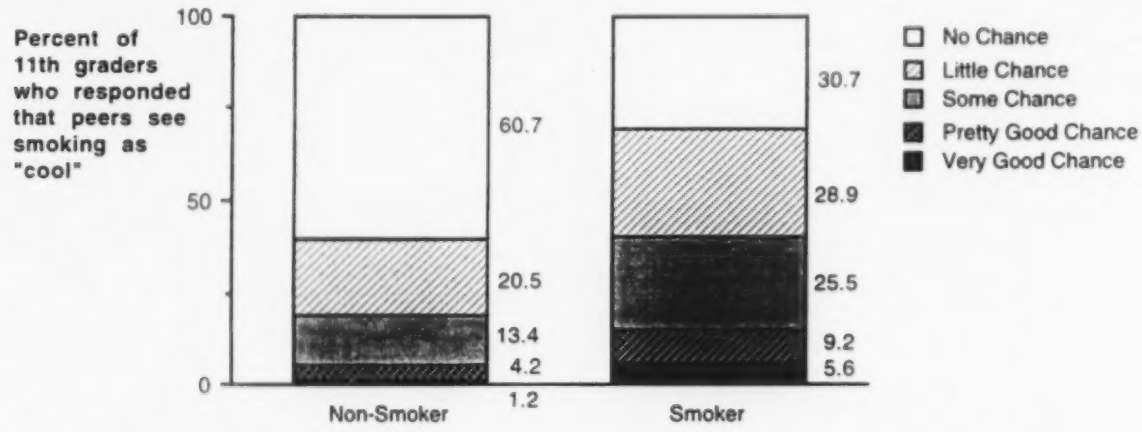
Figure 31
Risk Factors for **Smoking**
Best Friends Who Smoke Cigarettes
Eleventh Graders



Less than 5% of the eleventh graders who reported that they have no best friends who smoke reported that they smoked cigarettes in the past month. The figure triples for those with one best friend who smokes and doubles again for those with two best friends who smoke cigarettes. More than 43% of those with three best friends who smoke and 69% of those with four best friends who smoke, reported that they smoked cigarettes in the past month. The difference between those who have no best friends who smoke and those with four best friends who smoke is a fourteenfold increase in the risk of the respondent also smoking.

KEY FINDING #32 — Peer rewards for cigarette use ("I would be seen as cool") is a major predictor of cigarette use.

Figure 32
Risk Factors for **Smoking**
What Peers Think About Someone Smoking Cigarettes (Perception of Being "Cool")
Cigarette Smokers vs. Non-Smokers
Eleventh Grade

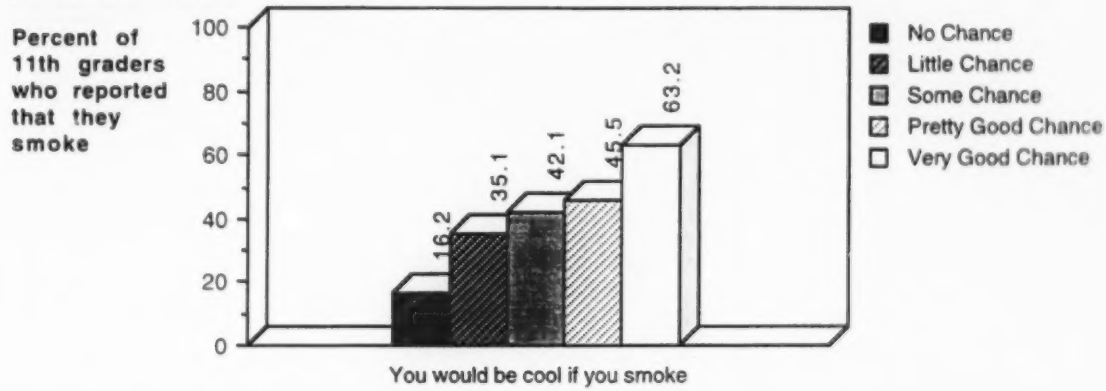


Of those who reported that they are not cigarette smokers, over 81% felt that there was either little or no chance of being viewed as "cool" by their peers if they smoked cigarettes. In comparison, over 40% of those who reported that they smoked cigarettes in the past month felt that there was at least some chance that their peers would view them as "cool" if they smoked cigarettes.

Of the entire sample, 52.4% of the eleventh graders felt that cigarette use would not make them seem "cool," while only 2.5% felt that there was a very good chance they would be perceived as "cool" if they smoked.

KEY FINDING #33 — Having friends who do not see smoking cigarettes as "cool" is protective against eleventh grade cigarette use.

Figure 33
Risk Factors for **Smoking**
Perception of Being "Cool"
Eleventh Grade

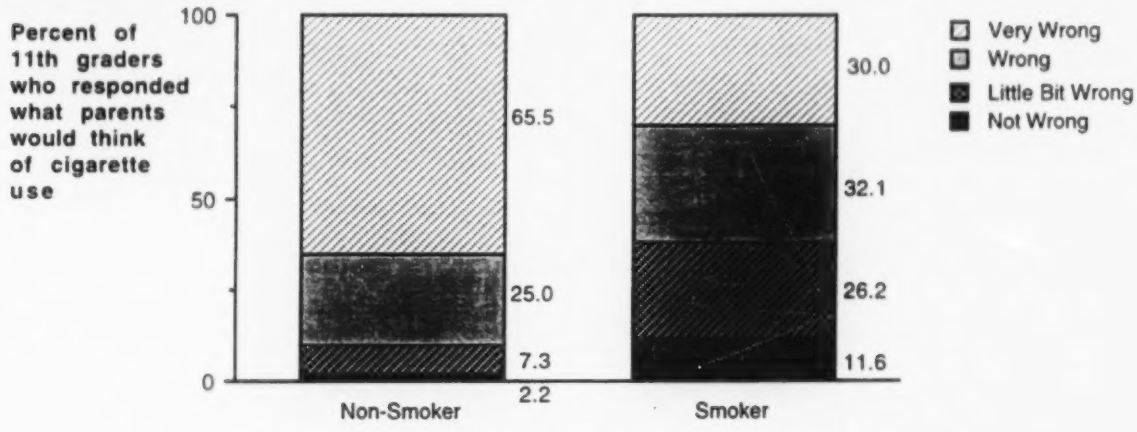


Of those eleventh graders who responded that there is no chance that peers will perceive them as "cool" if they smoke cigarettes, just over 16% reported that they smoked in the past month, compared to over 63% of those who responded that there is a very good chance that their peers perceive smoking as "cool."

Nearly 25% of the total group of eleventh grade respondents reported that they believe there is at least some chance of being perceived as "cool" if they smoke.

KEY FINDING #34 **Eleventh graders who reported that their parents are strongly opposed to cigarette smoking are much less likely to use cigarettes.**

Figure 34
Risk Factors for **Smoking Cigarettes**
What Parents Think About Someone Your Age Smoking Cigarettes
Cigarette Smokers vs. Non-Smokers
Eleventh Grade

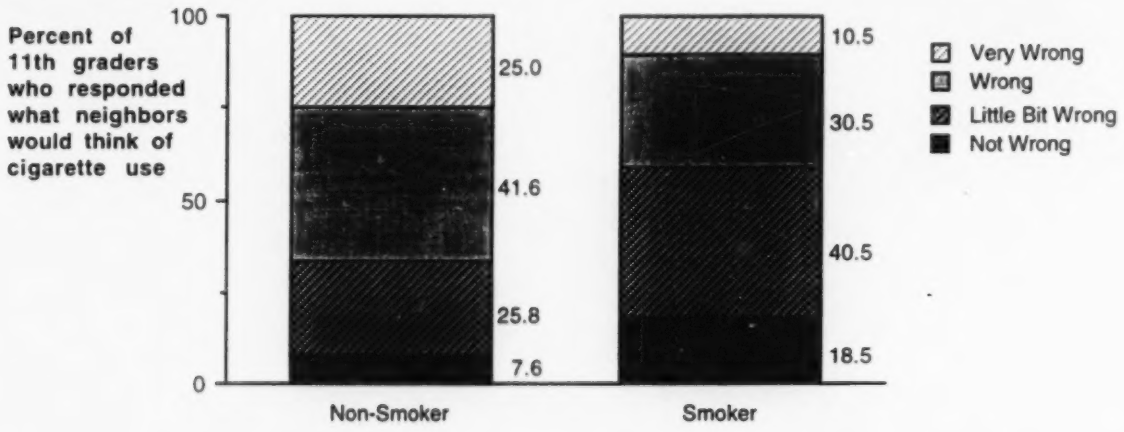


Over nine of ten (90.5%) eleventh graders who reported that they did not smoke in the past month, indicated that their parents feel it is either wrong or very wrong for them to smoke cigarettes. In contrast, only 62% of those who responded that they smoked cigarettes in the past month indicated that their parents have strong anti-cigarette smoking attitudes.

Of the entire eleventh grade sample, over half (55.5%) reported that their parents think cigarette smoking is very wrong, while 4.8% reported that their parents do not think cigarette smoking is wrong at all for their children.

KEY FINDING #35 — Eleventh graders who do not use cigarettes are more likely to come from neighborhoods where neighbors are opposed to cigarette smoking for young people.

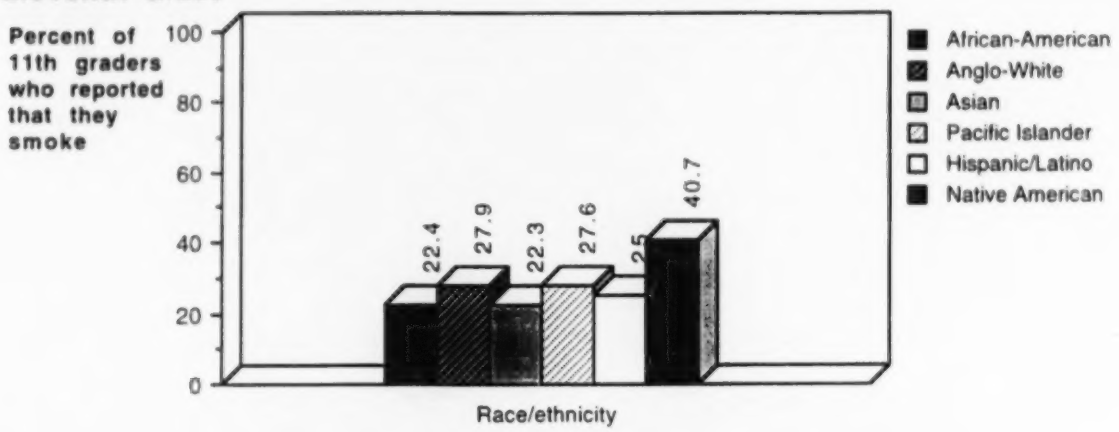
Figure 35
Risk Factors for **Smoking Cigarettes**
What Neighborhood Adults Think About Someone Your Age Smoking Cigarette Smokers vs. Non-Smokers
Eleventh Grade



Of those who reported that they did not smoke cigarettes in the past month, two-thirds reported that neighborhood adults feel that it is either very wrong or wrong for someone their age to smoke cigarettes. Of those who reported that they did smoke in the past month, 59% indicated that neighborhood adults think it is either not wrong or only a little bit wrong for someone their age to smoke.

KEY FINDING #36 **Native Americans have the highest percentage reporting the use of cigarettes of any ethnic group.**

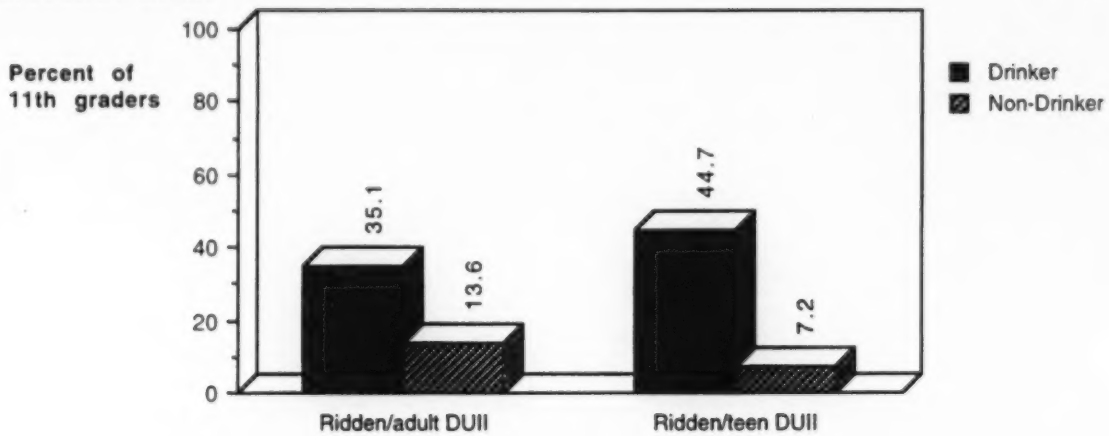
Figure 36
Cigarette Use
Race/Ethnicity
Eleventh Grade



Nearly 41% of the Native American eleventh graders reported smoking in the past month, compared to 22% of Asian and 22% of African-American eleventh graders. Overall, 27% eleventh graders reported that they smoked in the past month.

KEY FINDING #37 **Almost half (45%) of eleventh graders who reported using alcohol (past year) also reported riding in an automobile with a teen driver under the influence of alcohol or drugs.**

Figure 37
Risk Factors for **Drinking**
Riding with **Drivers Under the Influence**
Eleventh Grade



Over 35% of the eleventh graders who drink reported that they had ridden in a car driven by an adult under the influence of alcohol or drugs, and nearly 45% had ridden with other teen drivers under the influence of alcohol or drugs.

In comparison, of those eleventh graders who did not drink in the past year, nearly 14% had ridden at some time in the past year with drinking and driving adults, and just over 7% had ridden with drinking and driving teens.

Prevalence of Drug Use
Statewide Summary Tables

Table 1
Oregon **Eleventh Graders**
Differences in **Recent (past month) Use** of Twenty-two Types of Drugs
1986, 1988, 1990, 1992, 1994, 1996
Statewide

Drug	1986	1988	1990	1992	1994	1996	'94 -'96 Change per 100	'94 -'96 Percent Change
			(per 100 students)					
Alcohol	59.6	58.3	44.1	37.4	41.6	43.1	1.5	3.6
Marijuana	28.6	26.6	12.9	13.9	**16.8**	**21.7**	4.9	**29.2***
Hashish	N/A	N/A	2.9	3.3	3.4	3.2	-0.2	-5.9
Cocaine	9.0	6.4	2.7	1.5	1.1	1.3	0.2	18.2
Crack Cocaine	N/A	N/A	0.8	0.8	1.0	0.9	-0.1	-10.0
Amphetamines	7.0	5.4	4.3	3.1	**2.2**	**3.4**	1.2	**54.5***
LSD	3.2	5.6	3.2	4.6	3.7	3.8	0.1	2.7
Diet Pills	6.8	7.8	6.1	4.2	3.9	4.0	0.1	2.6
Pep Pills	5.2	4.4	2.6	2.6	N/A	N/A	N/A	N/A
Stay Awake Pills	N/A	N/A	11.6	8.1	8.6	7.9	-0.7	-8.1
Quaaludes	1.3	3.1	0.7	1.1	1.2	1.0	-0.2	-16.7
Barbiturates	2.1	3.8	1.4	1.7	N/A	N/A	N/A	N/A
Tranquilizers	2.2	2.4	1.8	1.9	N/A	N/A	N/A	N/A
Steroids	N/A	N/A	0.5	1.5	0.7	0.5	-0.2	-28.6
Heroin	0.5	1.7	0.4	0.9	0.5	0.5	0.0	0.0
Other Narcotics	2.6	3.0	1.6	2.1	1.9	2.3	0.4	21.1
Inhalants	4.7	5.9	4.0	5.5	4.0	3.9	-0.1	-2.5
Cigarettes	N/A	N/A	22.8	19.1	**24.7**	**27.6**	2.9	**11.7***
Smokeless Tobacco	N/A	N/A	16.6	12.4	16.3	14.2	-2.1	-12.9+

* = statistically significant difference p< .05
+ = statistically significant difference p< .10

Recent (30 day) use of marijuana by eleventh graders has increased 29.2% from 1994, going from 16.8 students per hundred reporting recent use in 1994 to 21.7 per hundred reporting recent use in 1996. This increase continues a trend that began in 1990, reversing several years of declining marijuana use. **Since 1990, recent (30 day) use of marijuana has increased 68%, going from 12.9 students per hundred reporting recent (30 day) use in 1990 to 21.7 per hundred reporting recent use in the current survey.**

Recent (30 day) amphetamine use is on the rise after years of declining use. **Reported recent (30 day) use of amphetamine has increased 54.5% from 1994**, going from 2.2 students per hundred reporting recent use in 1994 to 3.4 per hundred reporting use in 1996.

Cigarette use is also increasing. **Recent (30 day) use of cigarettes has increased 11.7% since 1994 and 45% since 1992.**

Table 2
Oregon **Eleventh Graders**
Differences in **Past Year Use** of Twenty Types of Drugs
1986, 1988, 1990, 1992, 1994, 1996
Statewide

Drug	1986	1988	1990	1992	1994	1996	'94 -'96 Change per 100	'94 -'96 Percent Change
			(per 100 students)					
Alcohol	82.5	82.2	75.7	67.3	68.4	69.2	0.8	1.2
Marijuana	46.0	42.8	27.3	23.8	**28.3**	**35.0**	6.7	**23.7***
Hashish	N/A	N/A	6.5	7.3	8.4	8.0	-0.4	-4.8
Cocaine	16.9	13.3	8.3	3.5	**2.8**	**3.7**	0.9	**32.1***
Crack Cocaine	N/A	N/A	1.7	1.7	**1.5**	**2.3**	0.8	**53.3***
Amphetamines	16.6	10.3	10.7	6.4	**5.9**	**7.5**	1.6	**27.1***
LSD	6.9	9.3	9.1	9.6	9.0	11.0	2.0	22.2+
Diet Pills	17.5	14.1	12.5	8.7	8.4	9.2	0.8	9.5
Pep Pills	12.1	9.5	6.9	5.1	N/A	N/A	N/A	N/A
Stay Awake Pills	N/A	N/A	30.9	21.5	21.1	21.6	0.5	2.4
Quaaludes	2.9	3.8	1.7	1.5	2.9	3.2	0.3	10.3
Barbiturates	4.3	5.6	3.4	3.0	N/A	N/A	N/A	N/A
Tranquilizers	6.3	4.9	4.0	3.7	N/A	N/A	N/A	N/A
Steroids	N/A	N/A	1.5	2.0	1.2	0.9	-0.3	-25.0
Heroin	0.9	2.2	1.1	1.0	1.0	1.1	0.1	10.0
Other Narcotics	7.3	6.7	5.4	5.0	3.7	5.0	1.3	35.1
Inhalants	10.5	12.5	10.8	12.0	10.5	10.7	0.2	1.9
Cigarettes**						38.1		
Smokeless tobacco**						26.2		

* = statistically significant difference p< .05
+= statistically significant difference p< .10
** data available for 1996 only

Reported past year use of marijuana has increased 23.7% since 1994, going from 28.3 students per hundred reporting use in the past year in 1994 to 35 per hundred reporting use in the current survey. This increase continues a trend that began in 1992, reversing several years of declining marijuana use.

Reported past year amphetamine use has increased, consistent with the 30-day results. Another disturbing increase is the reported past year use of cocaine (powder) and crack cocaine after years of declines in use. Reported use of each of these three drugs (cocaine, crack, and amphetamine) had been declining in Oregon until this year.

LSD use may also be the rise, although the reported use here does not reach the standard p = .05 level of statistical significance.

Table 3
Oregon **Eleventh Graders**
Differences in **Lifetime Use** of Twenty-two Types of Drugs
1986, 1988, 1990, 1992, 1994, 1996
Statewide

Drug	1986	1988	1990	1992	1994	1996	'94 -'96 Change per 100	'94 -'96 Percent Change
	(per 100 students)							
Alcohol	91.4	91.2	88.7	82.0	83.3	82.7	-0.6	-0.7
Marijuana	56.4	54.3	39.0	31.5	**35.1**	**41.6**	6.5	**18.5***
Hashish	N/A	N/A	12.6	11.0	12.0	12.3	0.3	2.5
Cocaine	22.6	17.4	11.6	7.1	**4.9**	**5.9**	1.0	**20.4***
Crack Cocaine	N/A	N/A	2.0	2.6	**2.4**	**3.8**	1.4	**58.3***
Amphetamines	25.4	16.9	15.7	11.1	**8.8**	**10.7**	1.0	**21.6***
LSD	9.8	13.7	12.3	12.3	12.3	14.3	2.0	16.2
Diet Pills	27.7	20.9	18.9	15.6	13.4	13.1	-0.3	-2.2
Pep Pills	17.3	14.1	12.0	8.6	N/A	N/A	N/A	N/A
Stay Awake Pills	N/A	N/A	44.0	34.7	29.5	30.8	1.3	4.4
Quaaludes	5.0	4.3	3.1	2.2	4.7	5.0	0.3	6.4
Barbiturates	8.2	7.5	6.2	4.8	N/A	N/A	N/A	N/A
Tranquilizers	11.6	8.7	6.3	5.7	N/A	N/A	N/A	N/A
Steroids	N/A	N/A	2.0	2.9	1.6	1.3	-0.3	-18.8
Heroin	2.0	3.1	2.1	1.7	1.7	2.0	0.3	17.6
Other Narcotics	12.2	11.1	8.9	7.9	5.8	7.2	1.4	24.1
Inhalants	25.8	28.1	25.1	23.8	21.0	21.0	0.0	0.0
Cigarettes	66.6	64.6	60.4	53.8	56.9	57.0	0.1	0.2
Smokeless Tobacco	N/A	N/A	43.5	35.6	39.4	37.6	-1.8	-4.5

* = statistically significant difference $p < .05$

The most important trend throughout this report is the increase in marijuana use. **Reported lifetime use of marijuana has increased 18.5% since 1994**, going from 35.1 students per hundred reporting lifetime use in 1994 to 41.6 per hundred reporting use in 1996. This increase continues a trend that began in 1992, reversing several years of declining marijuana use. (It should be noted that the percentage increase in lifetime use is always smaller than the increase in past year or 30 day use since the pool of lifetime users is larger to begin with and includes people who used in the past but have quit using.)

Another disturbing trend is the rise in cocaine, crack cocaine, and amphetamine use after years of declines in the reported use of those drugs. Reported use of each of these drugs had been stable or on the decline in Oregon until this year.

Table 4
Oregon **Eighth Graders**
Differences in **Recent (past month) Use** of Twenty-two Types of Drugs
1986, 1988, 1990, 1992, 1994, 1996
Statewide

Drug	1986	1988	1990	1992	1994	1996	'94 -'96 Change per 100	'94 -'96 Percent Change
	(per 100 students)							
Alcohol	38.3	36.6	22.8	26.2	29.8	29.6	-0.2	-0.1
Marijuana	12.1	12.6	4.5	5.8	**9.8**	**15.3**	5.5	**56.1***
Hashish	N/A	N/A	2.2	2.4	**2.4**	**3.0**	0.6	**25.0***
Cocaine	3.2	3.6	1.7	2.5	**1.4**	**1.8**	0.4	**28.6***
Crack Cocaine	N/A	N/A	0.8	1.3	**1.1**	**1.6**	0.5	**45.5***
Amphetamines	3.3	4.8	2.5	3.2	**2.2**	**2.7**	0.5	**22.7***
LSD	1.6	3.8	2.0	2.9	2.5	2.9	0.4	16.0
Diet Pills	5.3	8.9	5.8	5.8	4.0	4.2	0.2	5.0
Pep Pills	3.4	5.7	2.2	3.7	N/A	N/A	N/A	N/A
Stay Awake Pills	N/A	N/A	6.4	6.5	6.9	8.4	1.5	21.7
Quaaludes	1.5	2.9	1.1	1.4	1.0	1.1	0.1	10.0
Barbiturates	1.9	3.7	2.1	2.3	N/A	N/A	N/A	N/A
Tranquilizers	1.8	3.5	1.4	1.9	N/A	N/A	N/A	N/A
Steroids	N/A	N/A	1.3	1.4	**0.5**	**0.6**	0.1	20.0*
Heroin	0.7	2.0	0.6	1.5	0.8	0.9	0.1	12.5
Other Narcotics	1.2	3.0	1.5	1.6	1.6	2.1	0.5	31.3
Inhalants	7.1	11.3	7.3	10.9	11.0	10.3	-0.7	-6.4
Cigarettes	N/A	N/A	12.8	15.1	**18.9**	**21.6**	2.7	**14.3***
Smokeless Tobacco	N/A	N/A	6.2	9.0	**10.9**	**6.8**	-4.1	**-37.6***

* = statistically significant difference p< .05

Reported recent (past month) use of marijuana has increased 56.1% since 1994, going from 9.8 students per hundred reporting lifetime use in 1994 to 15.3 per hundred reporting use in 1996. There has been a steady increase in marijuana use since 1990. **Recent (past month) use of marijuana has more than tripled from 1990 to 1996.** Reported use of hashish has also been on the rise since 1990.

Past month cocaine (powder) and crack cocaine use in this age group is rising, although recent users are still a relatively small group. Reported recent amphetamine use also showed an increase this year, although it is still below 1986-1988 levels. Cigarette use is also rising. **Reported use of cigarettes in the past month is up by 14.3% this year and is up 69% since 1990.** Smokeless tobacco use, on the other hand, is showing a downward trend.

Table 5
Oregon **Eighth Graders**
Differences in **Past Year Use** of Twenty Types of Drugs
1986, 1988, 1990, 1992, 1994, 1996
Statewide

Drug	1986	1988	1990	1992	1994	1996	'94 -'96 Change per 100	'94 -'96 Percent Change
	(per 100 students)							
Alcohol	64.2	62.1	51.8	52.0	54.1	54.4	0.3	0.6
Marijuana	20.5	19.4	8.7	10.4	**15.2**	**23.6**	8.4	**55.3***
Hashish	N/A	N/A	4.2	3.8	**4.5**	**5.4**	0.9	**20.0***
Cocaine	6.1	4.5	2.5	3.5	**2.8**	**4.1**	1.3	**46.4***
Crack Cocaine	N/A	N/A	1.7	2.7	**2.1**	**3.7**	1.6	**76.2***
Amphetamines	6.1	7.3	4.4	4.7	5.4	5.7	0.3	5.6
LSD	3.6	5.3	3.0	4.3	**4.3**	**5.9**	1.6	**37.2***
Diet Pills	10.1	14.0	10.8	9.2	7.7	8.1	0.4	5.2
Pep Pills	5.8	8.0	3.7	5.6	N/A	N/A	N/A	N/A
Stay Awake Pills	N/A	N/A	11.1	11.4	13.1	15.2	2.1	16.0
Quaaludes	1.7	2.8	1.8	2.0	2.1	2.3	0.2	9.5
Barbiturates	3.1	5.3	3.3	4.2	N/A	N/A	N/A	N/A
Tranquilizers	3.1	5.0	2.5	3.5	N/A	N/A	N/A	N/A
Steroids	N/A	N/A	1.4	1.8	0.9	1.0	0.1	11.1
Heroin	0.9	2.2	0.8	1.8	1.4	1.8	0.4	28.6
Other Narcotics	2.0	4.4	3.3	2.8	3.0	4.4	1.4	46.7
Inhalants	13.3	18.9	12.9	17.5	21.2	20.8	-0.4	-1.9
Cigarettes**						31.4		
Smokeless tobacco**						15.0		

* = statistically significant difference p< .05
** data available for 1996 only

Reported past year use of marijuana has increased 55.3% since 1994, going from 15.2 students per hundred reporting lifetime use in 1994 to 23.6 per hundred reporting use in 1996. There has been a steady increase in reported past year marijuana use since 1990. **Past year use of marijuana has more than doubled from 1990 to 1996.** Reported past year use of hashish has also been on the rise since 1992.

Another disturbing trend is the rise in cocaine (powder) and crack cocaine use in this age group. **Although still a relatively small group, the proportion of self-reported cocaine users has also more than doubled since 1990.** Reported past year amphetamine use has not shown the same increase as 30-day use (suggesting that the user pool of eighth graders has not increased, but that those who do use are using more frequently and recently). Nonetheless, past year amphetamine use has risen 30% since 1990. LSD use appears to be on the rise for the eighth grade. Self-reported past year use rose 37.2% this year and has more than doubled since 1990. Because questions about past year use of tobacco products were not asked in previous years' surveys, trend data are not available.

Table 6
Oregon **Eighth Graders**
Differences in **Lifetime Use** of Twenty-two Types of Drugs
1986, 1988, 1990, 1992, 1994, 1996
Statewide

Drug	1986	1988	1990	1992	1994	1996	'94 -'96 Change per 100	'94 -'96 Percent Change
	(per 100 students)							
Alcohol	81.7	78.2	71.3	72.2	72.5	72.7	0.2	0.3
Marijuana	27.7	25.8	13.4	15.5	**19.5**	**28.3**	8.8	**45.1***
Hashish	N/A	N/A	5.8	5.4	**6.0**	**7.3**	1.3	**21.7***
Cocaine	9.4	7.1	3.6	5.6	**4.2**	**6.4**	2.2	**52.4***
Crack Cocaine	N/A	N/A	2.0	3.0	**3.2**	**5.3**	2.1	**65.6***
Amphetamines	10.4	10.3	6.3	6.8	8.4	8.2	-0.2	-2.4
LSD	5.3	6.9	3.9	5.6	**5.9**	**8.1**	2.2	**37.3***
Diet Pills	14.6	18.9	14.3	13.5	10.9	11.0	0.1	0.9
Pep Pills	9.0	10.6	5.3	7.8	N/A	N/A	N/A	N/A
Stay Awake Pills	N/A	N/A	16.5	16.6	16.6	18.7	2.1	12.7
Quaaludes	2.8	3.4	1.9	2.5	3.1	2.8	-0.3	-9.7
Barbiturates	5.6	6.0	3.6	5.7	N/A	N/A	N/A	N/A
Tranquilizers	6.9	7.5	3.6	4.8	N/A	N/A	N/A	N/A
Steroids	N/A	N/A	2.1	2.5	1.4	1.5	0.1	7.1
Heroin	1.6	3.1	0.9	2.4	2.4	2.8	0.4	16.7
Other Narcotics	4.1	6.2	4.5	4.4	4.3	5.8	1.5	34.9
Inhalants	24.7	30.1	18.4	25.3	28.2	29.6	1.4	5.0
Cigarettes	N.A	N/A	42.4	46.4	**44.7**	**49.3**	4.6	**10.3***
Smokeless Tobacco	N/A	N/A	25.7	23.8	**26.5**	**23.4**	-3.1	**-11.7***

* = statistically significant difference $p < .05$

Reported lifetime use of marijuana has increased 45.1% over the 1994 results, going from 19.5 students per hundred reporting lifetime use in 1994 to 28.3 per hundred reporting use in 1996. There has been a steady increase in marijuana use since 1990. **Self-reported use of marijuana (ever used) among eighth graders has more than doubled from 1990 to 1996.**

Another disturbing trend is the increase in the percentage of those in this age group who reported that they have ever used cocaine (powder) and crack cocaine. **Although still a relatively small group, the proportion of students who reported they have ever used cocaine has nearly doubled and the proportion of those who reported they have ever used crack cocaine has more than doubled since 1990.**

Reported lifetime use of amphetamine increased between 1990 and 1994 and has remained at the high 1994 levels this year.

Reported lifetime LSD use appears to be on the rise for the eighth grade. Lifetime use increased 37.3% this year and has more than doubled since 1990.

Cigarette use is also rising. It is now at the point where about half of the eighth grade respondents reported trying cigarettes at least once. Smokeless tobacco use, on the other hand, is showing a downward trend.

Table 7
Oregon **Sixth Graders**
Differences in **Lifetime, Annual, Monthly Use** of Three Types of Drugs
1994, 1996
Statewide

Drug1994	1994	1996	'94 -'96 Change per 100	Percent Change
	(per 100 students)			
Alcohol				
Lifetime	48.1	46.3	-1.8	-3.7
Past Year	**27.0**	**22.3**	-4.7	**-17.4***
Past Month	**11.4**	**8.9**	-2.5	**-21.9***
Marijuana				
Lifetime	5.1	5.2	0.1	2.0
Past Year	3.3	3.7	0.4	12.1
Past Month	1.8	2.1	0.3	16.7
Inhalants				
Lifetime	14.6	12.4	-2.2	-15.1
Past Year	9.3	7.3	-2.0	-21.5+
Past Month	5.6	4.1	-1.5	-26.8+
Cigarettes				
Lifetime	25	23.0	-2.0	-.08
Past Year	NA	10.9		
Past Month	6.3	5.9	-.4	-.06
Smokeless Tobacco				
Lifetime	13.3	11.0	-2.3	-17.0+
Past Year	NA	6.1		
Past Month	3.9	2.6	-1.3	-33.0+

* = statistically significant difference p<.05
+ = statistically significant difference p<.10

While reported marijuana use among sixth graders shows a modest increase in all time periods, it is not statistically significant. (We cannot rule out sampling error.) However, the consistency with the trends for eighth and eleventh grades suggest that the increase may be real.

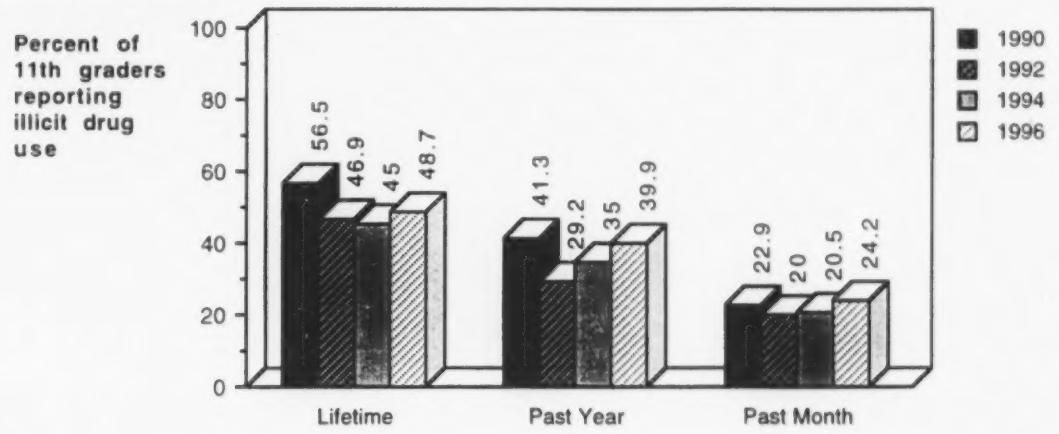
Good news is that reported alcohol use by sixth graders shows a downward trend. Reported smokeless tobacco use has also decreased. (Although not at the P<.05 level, it is consistent with the declines for the eighth and eleventh grades.)

Reported use of cigarettes by sixth graders remains close to 1994 levels.

Illicit Drug Indices

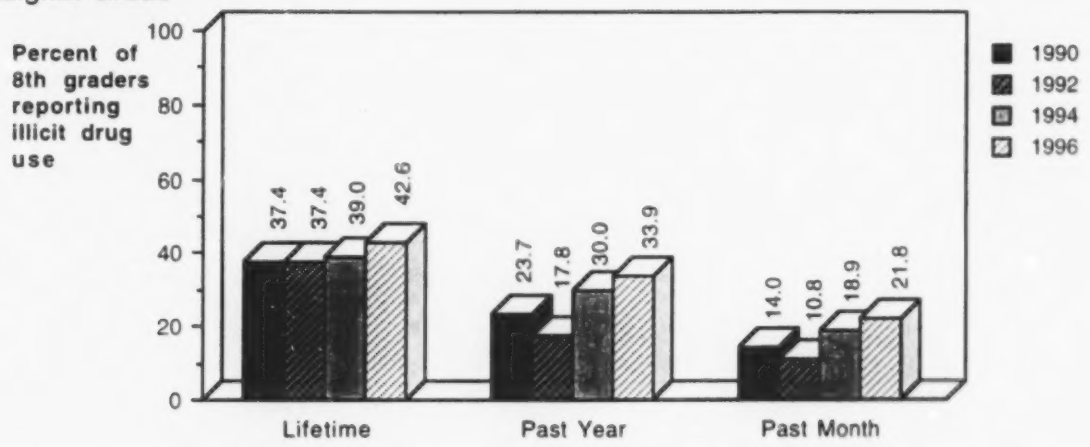
One of the clearest indicators available to assess trends in the use of illicit drugs is the illicit drug index. It measures the percentage of students who used any illicit drug during a specified period of time and conversely measures the percentage of students who remained free of illicit drugs during that period of time.

Figure 36
Illicit Drug Index
Eleventh Grade



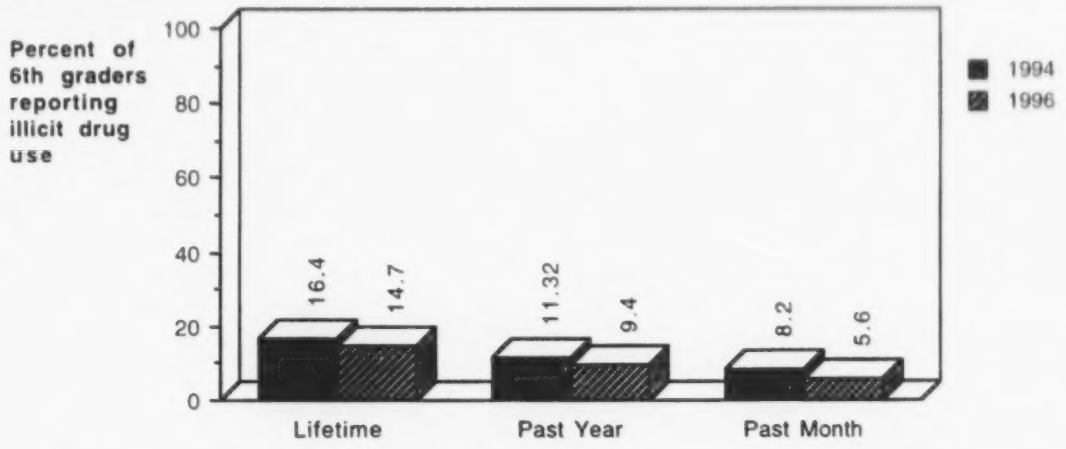
The declines witnessed between the 1990 and the 1994 samples did not continue in 1996. Instead the percentage of eleventh graders who reported the use of any illicit drug has risen relative to both 1992 and 1994 for all time periods. **Recent (past month) illicit drug use by eleventh graders has increased about 21% since 1992** and percentages for 1996 actually surpass those from 1990.

Figure 37
Illicit Drug Index
Eighth Grade



With the exception of a slight dip in illicit drug use in 1992 reported for annual and recent (30-day) use, there has been a rising drug use trend among eighth graders that continues with the 1996 sample. **Recent (past month) illicit drug use by eighth graders has doubled since 1992.** This increase is far greater than that reported by the eleventh graders.

Figure 38
Illicit Drug Index
Sixth Grade



From 1994 to 1996 there has been a slight decline in drug use among sixth graders. The survey for sixth graders contained questions about their use of cigarettes, smokeless tobacco, alcohol, marijuana, and inhalants.

Conclusion

The rise in marijuana and cigarette use by students in the public schools is the most disturbing trend in these data. The concern is that these substances pose health risks to the user and that they are gateway drugs to the use of other substances. Prevention efforts can utilize the risk and protective factor approach in planning prevention programs.